MONTHLY WEATHER REVIEW.

CHARLES F. MARVIN, Chief U. S. Weather Bureau.

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CONTENTS.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 1, NORTH ATLANTIC STATES.

Prof. WILFORD M. WILSON, District Editor.

GENERAL SUMMARY.

Like the preceding month, November was decidedly warm, the mean temperature averaging more than 3° above normal in all the States of the district, except Maryland, Delaware, and Virginia. With respect to temperature, this month closely resembled November in 1909 and 1902. It was exceptionally mild and pleasant, particularly in the Northern States, and the high temperatures caused unusual manifestations in nature. In some sections early spring flowering shrubs and such plants as dandelions produced blossoms after Thanksgiving Day.

The week ending on the 24th was the most remarkable, giving maximum temperatures equal to or higher than the highest recorded later than the middle of any November. Except in the Northern States, where cold weather prevailed on the 27th and 28th, the temperature was continuously above the normal after the 16th, and throughout the district the weather during the latter half of the month presented practically all the features of what is popularly termed "Indian summer."

The rainfall was generally light, fairly evenly distributed and timely in its occurrence. While it was not a decidedly dry month, the long intervals of nearly rainless weather between the few heavy storms made it unusually favorable for outdoor pursuits. Highways remained in excellent condition much longer than usual, and as a rule were not much broken up at the close of the month.

The following table exhibits the leading features of meteorological interest for the various sections of the district:

States, or parts of States within District No. 1.	Temperature.				Precipitation.				Average number of—	
	Average.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest total.	Least total.	Rainy days.	Clear days.
New England	41.4	+3.5	75	− 6	2.27	−1.68	6.36	0.20	7	12
New York	42.3	+4.1	79	8	3.10	+0.14	5.61	1.48	9	10
Pennsylvania	44.3	+3.9	77	18	2.71	−0.05	4.20	1.43	9	11
New Jersey	46.2	+3.2	77	19	2.71	−0.71	4.89	1.00	7	14
Maryland, Delaware, and District of Columbia	47.5	+2.6	87	20	1.67	−0.80	3.25	0.69	7	15
West Virginia	44.8	+3.2	82	13	3.76	+2.00	6.31	2.91	8	12
Virginia	47.8	+2.8	81	16	2.57	+0.25	4.60	1.03	5	16

TEMPERATURE.

The mean temperature in the district varied from 33.3° at Van Buren, Me., to 51.6° at Pocomoke City, Md. The highest temperature, 87°, occurred at Westernport, Md., on the 22d, and the lowest, −6°, at Van Buren, Me., on the 28th. As very rarely occurs in November, the highest temperature at most stations came in the third decade. Curiously enough, too, the coldest weather of the month came on dates earlier than the 12th at most places south of New York. In New England and New York the lowest temperatures were recorded generally about the 27th or 28th. Temperatures were considerably below the seasonal average throughout the district on the 1st, 10th, 11th, and 12th, and in the Northern States on the 27th and 28th. A period of remarkably warm weather extended from the 16th or 17th through 10 days or more. At Binghamton, N. Y., the temperature for the week ending on the 24th was more than 18° above normal, showing an excess that has seldom been equaled in this part of the country at any season of the year. Decidedly warm weather prevailed also on the 7th, 8th, and 9th.

The minimum temperatures were higher than usual for November in all parts of the district but Maine, where a few stations recorded temperatures below zero. Southward from Massachusetts the temperature did not fall below 20°, except at a few stations in the more exposed localities.

PRECIPITATION.

The total precipitation averaged less than 3 inches in all States, except New York and West Virginia. The only stations where the precipitation was over 6 inches were Somerset, Vt., and Bayard, W. Va.; the former station reported a total of 6.36 inches and the latter 6.31 inches. Precipitation of 1 inch or less occurred at 6 stations in Maine, 1 in New Hampshire, 1 in New Jersey, and 4 in Maryland.

The principal storm of the month occurred on the 8th–9th and caused rainfall varying from over 3 inches in central New York to 1 inch or more in Virginia and about half an inch in northern Maine. Nearly one-third of the district received 2 inches or more of rain during the progress of this storm. It caused precipitation of more than 2.50 inches within 24 consecutive hours at 7 of the stations in New York, 1 in Vermont, 2 in New Jersey, and 2 in Virginia. The greatest 24-hour precipitation for the month was 4.15 inches at Windham, N. Y., on the 9th.

Moderate amounts of precipitation fell in the southern part of the district on the 14th and 16th, in the northern part on the 20th, in the western sections on the 28th, and in the remainder of the district on the following day.

There was much less snow than usual in November, the total amount being less than 1 inch at nearly all stations south of New York. In fact no snow was observed at many stations in Virginia, Maryland, Delaware, New Jersey, and a few even in New York, Connecticut, Rhode Island, and Massachusetts. In the northern parts of the New York and the New England sections snow fell on several dates, chiefly the 11th, 16th, 28th, and 29th. The amounts varied from a trace to about 4 inches.

The greatest snowfall recorded within the district was 26 inches at Bayard, W. Va., and practically all of this amount fell on the 9th and 10th in what has been termed "by far the greatest snow storm of record for the season" in the regions just west of the mountains. Strange as it may seem, this storm caused only slight amounts of snow a little farther east.

MISCELLANEOUS.

Moderate stages prevailed in all the principal rivers throughout the month, though local freshets followed the heavy rain of the 9th in the smaller streams. The greatest variation noted in the stages of the large rivers was in the Susquehanna at Williamsport, Pa., where the river gage showed a maximum reading of 10.2 feet on the 11th and a minimum reading of 2.2 feet on the 6th, 7th, and 8th.

The amount of sunshine was not far from the normal over most sections, though there was a marked deficiency in the central inland part of the district and a slight excess along the coast. Near the middle of the district, where the second warm period gave the greatest departures in temperature from normal, the percentage of sunshine was least, being only 23 at Binghamton, N. Y. The number of hours of sunshine at that station was only 66, while it was 188 at Atlantic City, N. J.

TABLE 1.—*Climatological data for November, 1913. District No. 1, North Atlantic States.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maine.																				
Bar Harbor	Hancock	20	27	39.8	+ 0.9	67	20†	12	28	34	1.00	− 3.79	0.50	T.	4	15	6	9	sw.	William Miller.
Cornish	York	778	58	40.9	+ 5.8	75	20	16	28	47	3.48	− 0.74	2.45	4.5	8	13	7	10	nw.	T. H. West.
Eastport	Washington	53	41	40.4	+ 3.6	67	20	18	28	30	0.90	− 3.18	0.53	0.1	7	8	7	15	sw.	U. S. Weather Bureau.
Fairfield	Somerset	90	28	39.8	+ 4.4	71	23	12	28	39	0.65	− 2.17	0.35	2.0	2	16	6	8	.....	E. F. Parker.
Farmington	Franklin	450	16	36.8	+ 3.7	68	23	7	28	40	2.31	− 1.02	0.66	3.0	8	13	8	9	nw.	State Normal School.
Gardiner	Kennebec	163	21	39.8	+ 3.1	69	20	12	28	42	1.93	− 1.91	0.52	2.0	8	18	1	11	sw.	Samuel D. Soule.
Greenville	Piscataquis	1,140	9	34.0	.....	65	7	4	28	39	2.98	+ 0.21	1.35	3.5	9	.....	.....	.....	.....	U. S. Weather Bureau.
Houlton	Aroostook	362	11	36.0	.....	60	23	17	3†	30	1.26	− 0.79	0.55	1.0	6	13	5	12	sw.	Bangor & Aroostook R. R.
Lewiston	Androscoggin	185	39	39.2	+ 3.5	68	20	16	28	39	2.14	− 1.83	1.16	5.0	6	14	10	6	nw.	Union Water Power Co.
Madison	Somerset	257	10	35.7	.....	69	24	7	28†	41	3.20	+ 0.29	1.52	2.5	7	18	0	12	w.	William Jardine.
Millinocket	Penobscot	386	10	36.6	.....	63	20	4	28	37	1.62	− 1.72	0.68	2.0	9	12	2	16	w.	F. C. Bowler.
North Bridgton	Cumberland	450	20	39.8	+ 2.8	70	20	16	28	44	2.78	− 0.73	1.67	4.5	6	11	13	6	nw.	G. E. Chadbourne.
Orono	Penobscot	129	44	40.5	+ 6.3	66	20	9	28	37	3.39	− 0.48	0.76	T.	6	15	8	7	sw.	Department of Physics.
Patten	do	550	11	35.0*	.....	70*	22	− 2*	28	50*	0.20	.....	0.20	2.0	1	12*	4*	9*	sw.	Bangor & Aroostook R. R.
Pemaquid	Lincoln	0	....	40.3	.....	70	20	11	3	41	1.37	.....	0.54	0.1	7	20	3	7	sw.	Margaret Adams.
Portland	Cumberland	99	42	41.4	+ 3.8	70	20	20	28	29	1.20	− 2.60	0.45	0.8	8	15	4	11	sw.	U. S. Weather Bureau.
Presque Isle	Aroostook	.....	4	34.8	.....	63	23	− 2	28	35	0.71	.....	0.45	2.6	5	7	13	10	s.	E. M. Libby.
Rumford Falls	Oxford	505	20	37.6	+ 3.5	66	23	10	28	26	2.69	− 0.61	1.74	4.0	8	16	9	5	nw.	Charles A. Mixer.
Van Buren	Aroostook	510	8	33.3	.....	62	23	− 6	28	31	0.62	.....	0.22	1.8	8	9	6	15	w.	J. M. Thomas.
Winslow	Kennebec	90	18	40.8	+ 6.4	68	20†	11	28	39	1.68	− 1.47	0.73	2.0	6	20	2	8	w.	Hollingsworth & Whitney Co.
New Hampshire.																				
Alstead Center	Cheshire	1,120	9	38.8	+ 3.8	62	20	18	27	32	1.81	− 2.71	0.75	11.0	8	17	4	9	nw.	Frank Dewing.
Benton	Grafton	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	State Sanatorium.
Bethlehem	do	1,470	21	36.5	+ 3.9	64	23	12	27	33	1.62	− 2.09	0.47	3.3	11	14	7	9	w.	Benjamin Tucker.
Concord	Merrimack	350	53	39.9	+ 3.1	70	20	19	27	46	1.76	− 1.63	0.74	6.4	9	8	8	14	nw.	U. S. Weather Bureau.
Durham	Stafford	88	18	41.4	+ 2.4	71	20†	15	27	41	0.88	− 3.60	0.48	T.	5	16	3	11	nw.	Agr. Exp. Station.
Franklin	Merrimack	440	14	39.9	+ 4.1	70	20	17	27†	46	1.86	− 0.54	0.61	6.2	10	15	2	13	nw.	Dr. C. P. Webster.
Grafton	Grafton	863	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. R. Kimball.
Hanover	do	603	79	38.8	+ 5.2	67	20†	15	1	46	1.85	− 1.18	0.80	5.0	12	7	9	14	s.	Dartmouth College.
Keene	Cheshire	506	28	39.4	+ 2.7	69	20	14	27	47	1.42	− 2.50	0.60	7.8	8	13	6	11	nw.	Samuel Wadsworth.
Nashua	Hillsboro	125	28	42.8	+ 4.6	71	20†	19	27	44	2.29	− 1.69	1.09	4.0	9	13	5	12	nw.	C. B. Stevens.
Newton	Rockingham	.....	25	40.8	+ 3.0	71	20†	13	27	39	2.01	− 2.16	1.03	T.	7	14	6	10	sw.	W. C. Gale.
Plymouth	Grafton	500	25	38.5	+ 5.8	65	20†	15	28	41	2.46	− 1.46	0.84	6.0	7	13	3	14	w.	Hattie G. Trow.
Vermont.																				
Bloomfield	Essex	.....	6	36.6	.....	63	7	5	28	46	1.19	.....	0.55	4.0	10	12	4	14	s.	Lyman Falls Power Co.
Cavendish	Windsor	910	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. D. Kingsbury.
Chelsea	Orange	840	18	36.6	+ 3.4	65	20†	12	27	42	2.15	− 2.03	0.50	6.0	11	11	7	12	n.	W. F. Dewey.
Manchester	Bennington	980	14	40.4	.....	65	22	20	27	34	2.87	.....	0.91	4.2	8	6	14	10	sw.	N. M. Canfield.
Somerset	Windham	2,096	1	36.6	.....	67	22	13	28	46	6.42	.....	3.64	12.5	13	10	4	16	sw.	Power Construction Co.
St. Johnsbury	Caledonia	711	20	38.0	+ 4.7	62	9†	12	1	41	1.25	− 2.71	0.50	0.3	8	15	6	9	nw.	Fairbanks Museum.
Woodstock	Windsor	700	21	38.6	+ 4.8	65	20†	15	27	41	1.92	− 1.59	0.70	8.0	6	4	4	22	.....	John S. Eaton.
Massachusetts.																				
Amherst	Hampshire	222	24	41.8	+ 3.5	68	20	23	1†	40	2.11	− 1.74	0.69	2.5	9	8	6	16	nw.	Agricultural Exp. Station.
Blue Hill	Norfolk	640	29	42.8	+ 3.1	67	20	22	1	28	2.70	− 1.92	1.27	2.0	10	11	7	12	w.	Bule Hill Observatory.
Boston	Suffolk	124	43	46.5	+ 5.3	71	20	27	27	29	2.15	− 1.95	1.29	T.	6	13	5	12	w.	U. S. Weather Bureau.
Chestnut Hill	do	124	33	44.8	+ 3.5	70	7	24	1†	35	2.69	− 1.89	0.79	0	8	21	0	9	.....	Metropolitan Water Board.
Clinton	Worcester	370	17	43.4	.....	69	20	21	26	33	2.73	.....	1.25	5.6	8	.....	.....	.....	.....	Do.
Concord	Middlesex	139	23	41.6	+ 3.4	71	7	21	27	43	2.11	− 1.12	1.11	2.1	8	9	11	10	sw.	Fred A. Tower.
Fall River	Bristol	200	47	44.9	+ 2.0	68	20	25	27	22	2.23	− 2.53	1.10	0.5	9	7	20	3	sw.	C. V. S. Remington.
Fitchburg	Worcester	550	30	42.0	+ 3.4	69	7	19	27	37	2.30	− 2.09	0.88	8.0	9	15	5	10	w.	Dr. A. P. Mason.
Framingham	Middlesex	160	33	43.5	+ 2.8	69	20	22	1†	39	2.44	− 1.81	1.14	3.8	8	.....	.....	.....	.....	Metropolitan Water Board.
Hyannis **	Barnstable	31	22	46.1	+ 1.2	66	20†	26	1	25	1.78	− 3.25	0.90	0	9	12	14	4	nw.	C. F. Sleeper.
Lawrence	Essex	51	29	42.5	+ 2.6	70	20	22	27	39	2.13	− 2.07	1.05	1.0	9	12	15	3	sw.	Essex Co.
Lowell	Middlesex	100	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Props. Locks and Canals.
Middleboro	Plymouth	53	27	43.9	+ 3.6	71	20	18	1	40	2.47	− 2.11	1.33	0.1	7	7	7	16	sw.	A. R. Gurney.
Nantucket	Nantucket	47	27	46.6	+ 1.4	64	8	32	1	20	1.91	− 1.37	0.76	T.	10	6	11	13	w.	U. S. Weather Bureau.
New Bedford	Bristol	88	101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	City Engineer.
Norfolk	Norfolk	244	10	43.0	.....	70	7	12	27	48	3.00	.....	1.37	1.4	7	9	13	8	sw.	Ruby H. Martyn.
Plymouth	Plymouth	.....	28	43.4	.....	68	21	23	1	32	2.79	.....	1.28	T.	8	14	7	9	w.	Laura B. Knapp.
Provincetown	Barnstable	40	26	46.1	+ 2.2	65	20	30	1	19	2.21	− 1.39	1.23	0	5	22	0	8	sw.	Gideon Bowley.
Rockport	Essex	25	11	45.4	.....	70	23	24	1	25	1.55	.....	0.96	0	6	11	8	11	nw.	C. F. P. Bearse.
Rutland	Worcester	1,160	11	40.0	.....	66	21†	19	27	34	2.73	.....	0.99	5.3	10	8	18	4	sw.	State Sanatorium.
Springfield	Hampden	199	....	44.8	.....	71	20	22	27	38	2.21	.....	0.63	4.4	9	7	11	12	nw.	.....
Turners Falls	Franklin	200	22	42.4	+ 5.2	68	20	21	28	32	2.99	− 0.07	1.35	8.0	9	21	0	9	.....	Turners Falls Co.
Westboro	Worcester	298	39	45.2	+ 5.4	70	20	24	11	39	2.75	− 1.39	1.35	4.5	8	.....	.....	.....	.....	G. S. Newcomb.
Williamstown	Berkshire	711	32	41.6	+ 4.0	64	22	19	27	32	1.63	− 1.90	0.55	3.3	12	8	15	7	n.	Williams College.
Worcester	Worcester	518	21	42.2	+ 1.6	64	20†	24	27	27	2.20	− 3.18	0.97	7.7	8	10	7	13	sw.	G. W. Swan.
Rhode Island.																				
Block Island	Newport	26	33	47.6	+ 2.3	63	20	33	27	17	2.24	− 1.64	0.99	0	5	8	13	9	sw.	U. S. Weather Bureau.
Bristol	Bristol	53	27	46.0	+ 2.2	65	20	26	27	18	1.82	− 2.15	0.97	1.0	6	14	11	5	w.	N. G. Herreshoff.
Kingston	Washington	250	24	42.4	+ 1.3	69	20	18	27	36	2.48	− 2.60	1.20	T.	5	14	8	8	w.	Nathaniel Helme.
Narragansett Pier	Newport	22	31	45.5	+ 2.4	70	20	24	1	26	2.99	− 1.37	1.25	0	9	14	9	7	nw.	U. S. Weather Bureau.
Providence	Providence	182	9	45.8	+ 5.4	70	20	26	27	24	1.96	− 2.14	1.02	0.4	7	8	11	11	nw.	Do.
Connecticut.																				
Bridgeport	Fairfield	20	20	45.1	.....	73	20	27	1†	34	2.61	.....	0.70	T.	9	6	14	10	sw.	William Jennings.
Canton	Hartford	900	52	42.6	+ 3.7	70	20	21	27	41	3.72	− 0.89	1.23	3.0	6	14	6	10	sw.	G. J. Case.
Colchester	New London	370	27	43.2	+ 2.1	70	8	21	27	36	2.80	− 2.06	0.85	1.0	8	11	7	12	w.	S. P. Willard.
Cream Hill	Litchfield	1,300	17	40.6	+ 3.9	66	20	18	27	31	3.23	− 0.17	1.70	3.5	8	13	4	13	nw.	C. L. Gold.
Danielson	Windham	300	11	43.5	.....	69	20	22	27	35	3.75	.....	2.00	2.0	6	18	5	7	n.	F. E. Bitgood.
Hartford	Hartford	159	9	44.5	+ 5.0	70	20	26	27	29	2.12	− 1.70	0.82	0.7	8	8	8	14	nw.	U. S. Weather Bureau.
Hawleyville	Fairfield	600	15	42.9	+ 3.3	68	20	24	11†	40	3.50	+ 0.37	1.65	3.0	8	12	5	13	nw.	C. B. Hawley.
New Haven	New Haven	127	126	45.4	+ 4.1	72	20	27	27	28	2.74	− 0.84	0.87	0.4	7	8	10	12	n.	U. S. Weather Bureau.
New London	New London	47	43	47.0	+ 4.8	70	20†	29	11	32	2.99	− 1.11	1.02	T.	7	11	11	8	w.	Thos. C. Dillon.
North Grosvenor Dale	Windham	400	23	41.7	+ 2.3	70	20	19	26	40	3.13	− 1.89	1.05	T.	8	12	7	11	w.	Grosvenor Dale Co.
Norwalk	Fairfield	116	23	42.9	+ 2.6	70	20	23	26	35	2.35	− 1.23	0.82	T.	7	13	9	8	nw.	Geo. C. Comstock.
Southington	Hartford	140	44	42.7	+ 4.3	70	20	22	27	37	2.85	− 1.03	1.15	3.0	8	6	18	6	n.	Luman Andrews.

TABLE 1.—*Climatological data for November, 1913. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Connecticut—Contd.																				
Storrs	Tolland	640	25	44.2[f]	+ 5.3	67[f]	20†	23	2	34	2.05	− 2.39	1.30	0	3	17	2	11	nw.	Agricultural Exp. Station.
Torrington	Litchfield	625	12	39.8[a]	.....	69[a]	21	18[a]	27†	41[a]	3.46	.....	1.00	0	5	14[a]	3[a]	12[a]	nw.	Prof. E. H. Forbes.
Voluntown	New London	260	28	42.1	+ 0.8	71	20	15	1	47	2.30	− 2.68	0.68	0	5	15	7	8	nw.	J. L. Herbert.
Waterbury	New Haven	400	38	44.0	+ 3.4	70	20	24	27	39	2.92	− 1.47	1.30	2.0	8	.....	.....	.....	.....	N. J. Welton.
New York.																				
Addison	Steuben	1,000	23	44.0	+ 4.9	76	21	21	6	38	2.36	+ 0.45	1.62	T.	8	14	5	11	sw.	Dr. H. R. Ainsworth.
Albany	Albany	97	92	42.8	+ 4.4	68	20	26	28	30	1.48	− 1.32	0.48	0.4	10	8	9	13	s.	U. S. Weather Bureau.
Alfred	Allegany	1,976	18	40.8	+ 5.2	68	21	22	10†	39	2.57	− 0.32	1.17	1.5	19	.....	.....	.....	.....	F. S. Place.
Amsterdam	Montgomery	277	9	39.8	.....	66	23	19	27	36	4.05	.....	2.30	2.0	7	13	2	15	w.	Emery Elmwood.
Athens	Greene	90	11	43.1	+ 3.8	69	20	25	27	34	1.53	− 0.49	0.42	2.0	8	8	6	16	nw.	E. C. Brooks.
Ballston Lake	Saratoga	400	9	39.7	.....	65	9†	18	27	37	2.32	.....	0.62	4.5	12	9	7	14	s.	Geo. R. Schauber.
Bedford	Westchester	450	22	42.2	+ 1.0	68	20	25	11†	35	3.65	− 0.02	0.75	.....	9	7	19	4	.....	Dr. L. Rosenberg.
Beerston	Delaware	1,214	1	42.0	.....	69	22	21	6†	45	4.70	.....	3.38	3.5	11	10	7	13	w.	John Q. Barlow.
Binghamton	Broome	875	22	43.6	+ 6.0	70	21	26	27	38	2.57	+ 0.30	1.69	2.3	10	2	6	22	nw.	U. S. Weather Bureau.
Bouckville	Madison	1,350	16	39.8	+ 5.5	66	22	18	27	32	3.17	+ 0.22	1.60	5.5	15	2	11	17	s.	L. W. Griswold.
Boyds Corners	Putnam	500	31	.....	.....	.....	.....	.....	.....	.....	2.87	− 0.75	.....	.....	.....	.....	.....	.....	.....	Thos. Manning.
Carmel	....do	500	21	40.8	+ 1.2	68	20	22	27	37	3.14	− 0.37	1.44	4.0	7	11	5	14	ne.	Do.
Chatham	Columbia	470	12	41.9	+ 4.8	67	20	19	27	34	1.91	+ 0.02	0.57	2.0	12	11	6	13	n.	Morton R. Tank.
Cooperstown	Otsego	1,250	59	40.0	+ 5.0	67	22	20	16	33	3.69	+ 0.65	1.03	2.0	13	14	8	8	n.	Miss Elizabeth C. Keese.
Corinth	Saratoga	542	11	.....	.....	.....	.....	.....	.....	.....	2.31	.....	0.68	4.0	5	.....	.....	.....	.....	A. M. Hollister.
Cortland	Cortland	1,129	51	42.5	+ 6.3	69	22†	22	27	40	3.06	− 0.08	1.53	1.1	14	10	8	12	s.	F. G. Baker.
Cutchogue	Suffolk	32	14	47.0	+ 3.9	73	3	29	27	33	2.23	− 0.46	0.75	T.	6	11	15	4	nw.	Wm. A. Fleet.
De Ruyter	Madison	1,300	10	43.1	+ 7.7	79	6	18	27	57	3.11	+ 0.39	1.41	3.4	14	14	2	14	s.	B. D. Crandall.
Elmira	Chemung	863	30	44.4	+ 4.9	70	20†	26	27	35	2.30	+ 0.32	1.74	T.	5	8	6	16	sw.	T. A. Brown.
Glens Falls	Warren	340	22	41.8	+ 5.5	68	20	22	6	37	1.52	− 1.65	0.62	4.5	8	13	3	14	w.	Prof. C. L. Williams.
Gloversville	Fulton	850	21	39.3	+ 4.6	65	22	19	27	37	4.66	+ 1.37	2.30	7.5	12	9	12	9	w.	W. L. McLean.
Greenfield Center	Saratoga	314	15	40.2	+ 4.4	65	20	13	28	35	2.29	− 0.17	0.80	.....	9	9	13	8	sw.	S. E. Darrow.
Haskinville	Steuben	.....	18	.....	.....	.....	.....	.....	.....	.....	2.35	− 0.07	1.85	0.8	7	.....	.....	.....	.....	W. G. Collins.
Hoosick Falls	Rensselaer	410	11	.....	.....	.....	.....	.....	.....	.....	2.33	.....	0.37	0.5	12	.....	.....	.....	.....	S. L. Cluett.
Indian Lake	Hamilton	1,705	14	.....	.....	65	6	8	27	.....	3.90	+ 1.14	2.25	.....	7	13	9	8	w.	Lester Severie, jr.
Jeffersonville	Sullivan	1,240	10	40.8	.....	70	22	20	1†	48	4.51	.....	3.04	2.0	11	13	9	8	w.	Chas. Wilfert, jr.
Liberty	....do	2,300	31	40.4	+ 5.1	64	22	21	11†	35	5.83	+ 2.51	2.98	0.8	6	13	4	13	nw.	Dr. H. M. King.
Little Falls	Herkimer	924	15	40.6	+ 5.4	68	22	22	27	31	3.09	+ 0.34	2.40	T.	9	10	8	12	w.	O. J. Dempster.
Mohonk Lake	Ulster	1,245	17	42.4	+ 0.7	65	20	22	11	25	3.00	+ 0.24	1.90	2.5	3	13	7	10	nw.	Daniel Smiley.
Morehouseville	Hamilton	1,697	5	36.3	.....	63	7†	12	1†	42	5.19	.....	1.72	12.5	11	19	4	7	w.	T. C. Remonda.
Morrisville	Madison	1,325	1	40.5	.....	68	22	18	27	41	.....	.....	.....	.....	.....	9	6	15	s.	I. M. Charlton.
Mount Hope	Westchester	200	16	45.3	+ 4.1	71	21	28	11†	30	3.46	+ 0.49	1.82	0	3	3	20	7	.....	W. A. Cornelius.
Mount McGregor	Saratoga	1,060	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Stanton.
Newark Valley	Tioga	825	26	.....	.....	.....	.....	.....	.....	.....	2.61	+ 0.21	1.40	1.0	9	.....	.....	.....	.....	Lyman D. Clinton.
New Berlin	Chenango	1,090	6	.....	.....	.....	.....	.....	.....	.....	3.31	.....	1.30	1.4	11	.....	.....	.....	sw.	Chas. F. Sarle.
New Lisbon	Otsego	1,234	23	39.3	+ 5.2	68	22	17	27	45	4.00	+ 1.48	2.56	1.0	10	8	5	17	sw.	G. A. Yates.
New York City	New York	314	88	46.9	+ 2.9	70	20	28	11	23	1.91	− 1.53	0.70	0	6	8	8	14	sw.	U. S. Weather Bureau.
North Creek	Warren	1,002	5	39.6	.....	67	20†	13	28	41	2.92	.....	.....	2.0	6	13	7	10	.....	W. G. Kenwell.
Northville	Fulton	742	11	.....	.....	.....	.....	.....	.....	.....	4.33	.....	1.93	3.5	7	.....	.....	.....	.....	P. C. Prichard.
Oneonta	Otsego	1,112	19	42.8	+ 4.6	72	22	23	6†	43	4.40	+ 1.74	2.99	1.0	9	11	6	13	sw.	H. W. Lee.
Oxford	Chenango	916	48	40.3	+ 4.4	66	22	22	6†	31	3.61	+ 0.83	1.91	3.0	9	5	13	12	w.	J. P. Davis.
Oyster Bay	Nassau	40	9	48.6	.....	70	20†	31	11	25	1.78	.....	0.55	0	4	19	3	8	sw.	Prof. Thos. Colby.
Port Jervis	Orange	470	29	42.9	+ 4.2	71	20†	23	1†	43	3.79	+ 0.82	2.23	1.0	11	10	8	12	nw.	W. H. Nearpass.
Roslyn	Nassau	215	1	46.2	.....	70	20	28	11†	32	2.15	.....	0.58	0	7	19	2	9	sw.	C. H. Hechler.
Salisbury	Herkimer	1,526	16	36.8	+ 2.2	68	22	17	27	32	4.24	+ 0.92	2.72	5.0	14	14	11	5	w.	Joseph Ryan.
Scarsdale	Westchester	200	9	46.9	.....	73	20	28	1†	32	2.52	.....	0.85	0	6	18	2	10	sw.	C. H. Wilmarth.
Setauket	Suffolk	40	28	46.8	+ 2.7	68	20	31	11	23	2.56	− 1.29	0.95	T.	9	13	10	7	w.	Selah D. Strong.
Sharon Springs	Schoharie	821	0	41.7	.....	70	22	21	27	35	3.70	.....	1.84	2.5	12	5	14	11	.....	Wm. M. Kling.
Sherburne	Chenango	.....	6	.....	.....	.....	.....	.....	.....	.....	3.39	.....	1.20	T.	8	.....	.....	.....	.....	D. G. Trow.
Southampton	Suffolk	36	12	46.6	+ 3.6	70	20	29	27	26	2.03	− 0.60	0.74	0	6	13	11	6	nw.	W. L. Jagger.
Southeast Reservoir	Putnam	310	18	.....	.....	.....	.....	.....	.....	.....	3.29	− 0.07	.....	.....	.....	.....	.....	.....	.....	Thos. Manning.
South Edmeston	Otsego	1,300	1	41.2	.....	68	22	19	27	44	3.49	.....	1.90	2.0	9	9	8	13	s.	F. H. Bilderbeck.
Spier Falls	Saratoga	400	12	39.4	+ 3.7	66	20	16	27	37	1.79	− 0.05	0.53	4.0	5	4	13	13	sw.	Geo. E. Fifield.
Trenton Falls	Oneida	751	10	.....	.....	.....	.....	.....	.....	.....	3.99	.....	1.25	.....	13	.....	.....	.....	.....	C. W. Young.
Tribeshill	Montgomery	269	10	.....	.....	.....	.....	.....	.....	.....	5.70	.....	2.60	2.0	5	.....	.....	.....	.....	R. S. Marshall.
Troy	Rensselaer	.....	0	44.7	.....	70	20	26	27†	30	.....	.....	.....	.....	.....	15	6	9	.....	David B. Plum.
Utica	Oneida	537	47	.....	.....	.....	.....	.....	.....	.....	3.73	− 0.18	1.03	.....	6	.....	.....	.....	.....	W. E. Young.
Wading River	Suffolk	112	7	45.3	.....	71	20†	22	6	41	2.63	.....	0.85	0	5	19	4	7	sw.	H. B. Fullerton.
Wapperingers Falls	Dutchess	110	23	43.2	+ 3.4	70	20	26	15	32	2.99	− 0.28	0.82	4.0	9	11	15	4	sw.	H. C. Townsend.
Warwick	Orange	538	19	.....	.....	.....	.....	.....	.....	.....	3.81	+ 1.17	1.90	0	9	11	12	7	.....	John W. Sly.
Waverly	Tioga	824	31	44.0	+ 1.7	72	21	22	6†	45	2.88	+ 0.52	1.95	1.7	12	4	15	11	s.	J. F. Shoemaker.
West Berne	Albany	946	14	.....	.....	70	22	.....	.....	.....	2.55	+ 0.01	1.75	2.5	8	3	9	18	w.	W. J. Haverly.
West Point	Orange	167	64	45.2	+ 3.3	70	20	29	11	26	2.16	− 1.79	1.81	T.	4	9	10	11	w.	U. S. Military Academy.
Windham	Greene	1,520	13	40.8	+ 4.5	69	22	21	6	44	5.61	+ 3.24	4.15	4.0	12	9	17	4	.....	A. R. Mott.
Pennsylvania.																				
Altoona	Blair	1,181	25	43.2	+ 3.6	70	21	21	11	31	3.08	+ 0.89	1.56	3.0	13	13	5	12	w.	S. A. Gailey.
Bethlehem	Northampton	260	12	47.0	+ 2.9	71	20	28	11	35	3.05	− 0.35	1.61	0	8	14[a]	8[a]	7[a]	w.	Chas. H. Rominger.
Catawissa	Columbia	470	4	45.2	.....	70	21	27	6	33	2.04	.....	0.89	1.8	11	9	8	13	.....	Wm. G. Yetter.
Clearfield	Clearfield	1,107	5	43.8	.....	75	21	23	11†	48	3.43	.....	1.95	0.8	16	9	6	15	nw.	E. W. Hess.
Drifton	Luzerne	1,633	15	40.4	+ 2.6	70	22	19	11	38	3.73	+ 0.26	1.60	4.5	11	14	10	6	w.	Eckley B. Coxe, jr.
Doylestown	Bucks	347	23	.....	.....	.....	.....	.....	.....	.....	2.75	− 0.88	1.55	.....	4	.....	.....	.....	.....	Alfred W. Walton.
Emporium	Cameron	1,050	26	42.1	+ 2.7	69	21	21	6	39	3.52	+ 0.78	1.61	0.5	15	6	7	17	w.	T. B. Lloyd.
Ephrata	Lancaster	384	13	44.9	+ 2.8	72	21†	24	1	37	1.43	− 0.55	0.56	T.	7	16	3	11	w.	W. L. Frantz.
Everett	Bedford	1,080	15	43.9	+ 4.0	77	22	21	6	44	3.90	+ 2.12	1.95	0.1	10	12	3	15	nw.	B. L. Steckman.
George School	Bucks	184	6	45.8	.....	72	20†	24	7	43	3.42	.....	2.05	0	8	16	5	9	w.	N. W. Swayne.
Gettysburg	Adams	600	39	45.6	+ 5.2	74	21†	24	6†	40	2.09	− 0.75	0.68	T.	9	11	9	10	nw.	Col. E. B. Cope.
Gordon	Schuylkill	804	9	43.4	.....	73	22	18	11	45	2.62	.....	1.30	2.0	8	13	4	13	w.	Capt. J. G. Johnson.
Hamburg	Berks	380	17	45.2	+ 3.1	71	19	22	5	35	1.43	− 1.59	0.69	T.	5	15	0	15	se.	W. J. Kalbach.
Hanover	York	600	9	46.1	.....	74	19	25	11	35	2.24	.....	0.77	0	9	16	2	12	s.	Miss Mabel Champlin.
Harrisburg	Dauphin	361	25	46.4	+ 4.7	72	19	30	11	29	1.68	− 0.67	0.73	0.8	7	8	6	16	w.	U. S. Weather Bureau.
Huntingdon	Huntingdon	650	25	44.6	+ 3.2	73	21	22	6	44	2.91	+ 0.43	1.60	2.0	9	9	8	13	w.	Prof. W. J. Swigart.
Hyndman	Bedford	977	6	45.4	.....	76	22	20	17	43	3.38	.....	1.04	T.	6	11	4	15	w.	H. Somers Fischer.
Lancaster	Lancaster	255	20	44.2	+ 2.8	73	19	23	6†	41	1.89	− 0.59	0.78	T.	5	9	7	14	w.	F. H. Shaw.
Lawrenceville	Tioga	1,006	15	42.8	+ 4.2	72	21	23	15	42	2.40	+ 0.09	1.60	T.	6	8	7	15	.....	C. P. Darling.
Lebanon	Lebanon	458	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Harry M. Schott.
Le Roy	Bradford	1,400	24	42.2	+ 4.8	67	21	22	11†	34	2.97	+ 0.36	1.80	2.0	17	10	5	15	sw.	G. W. T. Warburton.

TABLE 1.—*Climatological data for November, 1913. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Pennsylvania—Contd.																				
Lewisburg	Union	450	39	43.9	+ 4.3	72	21	22	10	37	2.23	− 0.45	0.79	2.0	9	9	6	15	w.	Prof. W. G. Owens.
Lock Haven	Clinton	560	25	45.3	+ 3.8	71	20	22	10	35	2.21	− 0.53	1.19	T.	11	5	9	16	w.	Prof. J. A. Robb.
Marion	Franklin	640	9	45.6	.....	74	19	21	28	35	2.92	.....	1.21	0	8	14	4	12	.....	Hon. C. B. Hege.
Mauch Chunk	Carbon	634	24	45.0	+ 4.6	76	22	23	11	44	3.20	− 0.29	1.75	0.2	10	14	2	14	w.	F. C. Wintermute.
Mifflintown	Juniata	445	9	44.1	.....	72	19	22	6	38	3.33	.....	2.42	0.5	8	10	5	15	w.	Wellington Smith.
Milford	Pike	455	10	41.0	+ 3.2	70	20	18	1	34	3.25	+ 0.64	1.79	T.	12	13	11	6	nw.	Mrs. Alla Doughty.
Montrose	Susquehanna	1,658	9	41.3	.....	65	20†	21	10†	28	2.45	.....	1.60	T.	9	8	4	18	se.	Silas Jagger.
Muncy Valley	Sullivan	519	2	42.9	.....	68	22	22	2	37	2.03	.....	0.91	1.0	5	14	2	14	.....	S. P. Worthington.
New Germantown	Perry	873	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ed. C. Johnston.
Philadelphia	Philadelphia	117	42	49.0	+ 4.1	74	20	30	11	24	2.85	− 0.21	1.23	T.	8	12	7	11	sw.	U. S. Weather Bureau.
Pocono Pines	Monroe	1,662	11	40.0	+ 5.2	72	20	20	11	36	4.20	+ 2.09	2.00	1.0	4	4	13	13	nw.	Carl Majer.
Reading	Berks	280	40	46.6	+ 4.1	70	21†	28	11	33	2.20	− 0.63	0.95	0.3	7	10	6	14	nw.	U. S. Weather Bureau.
Scranton	Lackawanna	805	13	44.8	+ 5.7	72	22	27	10	36	2.83	+ 0.54	1.62	0.4	13	4	8	18	s.	Do.
Selinsgrove	Snyder	455	25	44.0	+ 2.4	72	21†	24	2	38	2.26	− 0.57	1.22	1.5	8	3	11	16	sw.	J. M. Boyer, C. E.
Spring Mount	Montgomery	155	24	.....	.....	.....	.....	.....	.....	.....	1.90	− 1.22	0.76	.....	7	.....	.....	.....	.....	.....
State College	Center	1,191	25	43.2	+ 3.7	70	19	23	11	33	3.05	+ 0.44	1.72	0.3	11	.....	.....	.....	w.	Prof. Wm. Frear.
Stroudsburg	Monroe	425	3	43.7	.....	70	21†	22	7	36	3.27	.....	1.74	T.	10	12	8	10	sw.	J. Clyde Le Bar.
Towanda	Bradford	754	18	43.4	+ 4.4	70	22	21	6	44	2.51	+ 0.37	1.53	0.5	12	11	0	19	s.	Hiram E. Bull, C. E.
West Chester	Chester	455	59	46.2	+ 3.5	71	20	26	11	33	2.74	− 1.08	0.97	0	8	10	8	12	w.	J. C. Green, D.D.S.
Williamsport	Lycoming	530	23	46.3	+ 6.0	71	21	24	11	32	2.28	0.00	1.00	0.5	10	10	3	17	nw.	Henry H. Guise.
New Jersey.																				
Asbury Park	Monmouth	22	25	47.9	+ 3.7	74	20	27	1	30	1.00	− 2.27	0.66	0	5	14	6	10	sw.	H. E. Denegar.
Atlantic City	Atlantic	16	40	48.3	+ 2.8	77	20	30	1	25	2.31	− 0.92	1.23	0	7	12	8	10	nw.	U. S. Weather Bureau.
Bayonne	Hudson	50	23	46.6	+ 3.6	71	20	29	11	29	2.05	− 1.48	0.65	T.	7	13	7	10	nw.	Erskine R. Eadie.
Belvidere	Warren	289	22	45.5	+ 4.3	73	20	26	1†	40	3.31	− 0.18	2.57	0	6	20	1	9	.....	Samuel J. Hixson.
Bergen Point	Hudson	37	16	46.3	+ 3.3	72	20	29	11	30	2.15	− 1.43	0.76	T.	6	7	14	9	nw.	Wm. H. Mitchell, M. D.
Boonton	Morris	239	23	.....	.....	.....	.....	.....	.....	.....	2.89	− 0.78	1.12	T.	7	.....	.....	.....	.....	Joseph White.
Bridgeton	Cumberland	30	32	47.8	+ 2.9	77	20	28	1†	38	2.10	− 1.16	0.90	0	5	19	1	10	w.	Henry A. Jorden.
Burlington	Burlington	12	27	45.8	.....	72	19†	29	12	36	3.61	− 0.13	1.15	T.	7	19	2	9	nw.	D. S. B. McCoy.
Cape May City	Cape May	17	35	49.2	+ 1.8	73	20	32	1	21	1.32	− 1.90	0.52	0	8	12	10	8	nw.	U. S. Weather Bureau.
Charlotteburg	Passaic	719	21	43.7	+ 3.2	71	22	22	7	43	4.89	+ 1.16	.....	0	7	14	10	6	nw.	George S. Briggs.
Chatham	Morris	234	11	.....	.....	.....	.....	.....	.....	.....	2.85	− 0.89	0.70	0	6	.....	.....	.....	.....	M. A. Butler.
Clayton	Gloucester	126	20	46.8	+ 3.4	74	19	28	3†	31	2.35	− 1.18	1.05	0	3	18	2	10	nw.	William T. Farley.
Culver's Lake	Sussex	848	12	.....	.....	.....	.....	.....	.....	.....	3.78	+ 0.96	2.44	0.4	10	16	4	10	w.	Bric. E. Riker.
Dover	Morris	600	29	42.6	+ 2.3	69	20	23	1	38	3.19	− 0.44	.....	0	7	6	11	13	.....	William C. Hursh.
Elizabeth	Union	45	34	46.2	+ 2.6	73	20	25	1	39	1.87	− 1.47	0.64	T.	8	13	11	6	sw.	L. B. Bonnett.
Flemington	Hunterdon	140	25	46.4	+ 3.6	72	20	27	7†	40	3.23	− 0.12	1.49	T.	9	16	4	10	w.	Hiram E. Deats.
Haddonfield	Camden	75	26	46.8	+ 4.2	73	20	28	1	36	3.11	− 0.21	1.16	T.	11	10	10	10	nw.	Charles F. Richardson.
Highwood	Bergen	90	26	44.2	+ 1.9	72	20	24	1†	38	2.23	− 1.40	1.00	T.	7	10	10	10	s.	Charles J. Bates.
Imlaystown	Monmouth	185	25	45.4[a]	+ 1.1	74[a]	19	23[a]	11	42[a]	1.80	− 1.86	0.85	0	5	18	5	7	sw.	H. E. Bullock.
Indian Mills	Burlington	76	24	46.8	+ 3.4	75	19†	21	11	46	2.79	− 0.81	1.02	0	8	14	8	8	nw.	James Armstrong.
Jersey City	Hudson	10	15	47.2	+ 3.6	72	20	30	11	25	2.60	− 0.80	1.06	T.	6	11	7	12	sw.	Samuel K. Pearson, jr.
Lakewood	Ocean	54	11	45.6	.....	72	20	22	1†	35	2.06	.....	0.93	0	7	7	12	11	w.	Robert W. Holman.
Lambertville	Hunterdon	95	26	47.8	+ 4.8	72	20†	28	1†	39	3.02	− 0.59	1.73	.....	7	.....	.....	.....	.....	Samuel W. Cochran.
Little Falls	Passaic	175	11	.....	.....	.....	.....	.....	.....	.....	2.82	− 0.70	0.95	.....	9	.....	.....	.....	.....	A. Sweetman.
Long Branch	Monmouth	25	6	46.2	.....	74	20	25	11	27	3.66	.....	1.28	0	8	12	4	14	w.	William D. Martin, jr.
Mahwah	Bergen	312	11	.....	.....	.....	.....	.....	.....	.....	3.67	+ 0.33	1.82	0	6	.....	.....	.....	.....	Charles L. Barker.
Moorestown	Burlington	75	51	47.4	+ 4.4	74	19†	28	11	31	3.11	− 0.31	1.62	0	7	17	5	8	n.	George L. Gillingham.
Newark	Essex	159	70	47.6	+ 4.7	72	20	26	11	27	2.06	− 1.44	0.92	T.	7	16	6	8	nw.	Prof. Wm. Weiner.
New Brunswick	Middlesex	139	60	44.4	+ 0.8	72	21	26	1	36	2.20	− 1.39	0.60	T.	9	12	5	13	sw.	Earle C. Stillwell.
Newton	Sussex	678	34	44.2[a]	+ 4.4	71	20	25[c]	11	31[c]	4.24	+ 1.30	2.96	T.	7	15	2	13	w.	F. Vernon Losee.
Northfield	Atlantic	25	6	.....	.....	.....	.....	.....	.....	.....	2.24	.....	1.24	0	8	.....	.....	.....	.....	William L. Flick.
Paterson	Passaic	80	42	47.0	+ 3.7	73	20	28	11	38	2.96	− 0.30	1.63	T.	8	7	18	5	nw.	Heber A. Probert.
Phillipsburg	Warren	363	23	45.8	+ 4.2	71	20	27	7†	38	3.85	+ 0.57	2.28	T.	10	14	7	9	w.	D. W. Smith.
Plainfield	Union	100	27	45.5	+ 3.5	73	20	24	1	36	2.91	− 0.68	0.80	T.	9	6	14	10	sw.	John Neagle.
Pleasantville	Atlantic	26	15	.....	.....	.....	.....	.....	.....	.....	2.17	− 1.19	1.12	0	8	19	5	6	.....	Lincoln Van Gilder.
Pompton Plains	Morris	195	11	.....	.....	.....	.....	.....	.....	.....	3.41	− 0.08	1.28	0	8	.....	.....	.....	.....	M. S. Taylor.
Somerville	Somerset	60	30	45.8	+ 3.6	72	20	23	1	40	3.14	− 0.25	0.90	T.	8	18	4	8	nw.	A. A. Macdonald.
South Orange	Essex	200	43	45.0	+ 3.4	70	20	27	11	27	1.71	− 1.66	0.65	T.	8	11	9	10	s.	Dr. Wm. J. Chandler.
Sussex	Sussex	442	23	44.3	+ 3.8	71	20	24	1	40	3.65	+ 0.59	1.89	0	6	11	8	11	nw.	George Dymock.
Trenton	Mercer	190	42	46.2	+ 0.8	70	20	29	11	32	2.48	− 1.33	1.07	T.	7	11	7	12	w.	U. S. Weather Bureau.
Tuckerton	Ocean	23	20	46.2	+ 2.2	76	20	25	11	37	2.32	− 1.14	1.09	0	5	14	9	7	nw.	Frank R. Austin.
Vineland	Cumberland	118	44	46.9	+ 3.0	74	21†	27	1†	39	1.47	− 1.83	0.61	0	6	19	3	8	nw.	Alfred Chalmers.
Woodbine	Cape May	43	22	47.6[a]	+ 3.6	75[a]	20	25[a]	1	37[a]	2.02	− 1.13	1.23	0	8	.....	.....	.....	.....	Prof. R. D. Maltby.
West Virginia.																				
Bayard	Grant	2,500	11	41.0	+ 3.0	70	21	15	6	48	6.31	+ 3.94	1.80	26.0	12	14	1	15	w.	Solomon Clark.
Burlington	Mineral	875	19	43.3	+ 1.0	75	22	19	5	43	3.13	+ 1.33	2.15	T.	7	9	12	9	w.	J. W. Vandiver.
Franklin	Pendleton	.....	7	43.8	.....	70	19†	13	12	46	.....	.....	.....	.....	.....	14	8	8	.....	Miss Evelyn Calhoun.
Lost City	Hardy	.....	7	44.0	.....	68	20	20	5†	32	3.07	.....	2.00	T.	6	12	10	8	w.	B. D. Hinegardner.
Martinsburg	Berkeley	435	21	45.2	+ 2.4	74	19	25	11	43	3.04	+ 0.88	1.78	0	9	16	4	10	w.	G. W. Van Metre, C. E.
Moorefield	Hardy	900	18	50.6	+ 7.1	82	21	18	12	45	4.13	+ 2.54	1.99	T.	7	16	5	9	nw.	John C. Fisher.
Romney	Hampshire	824	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. F. Staub.
Upper Tract	Pendleton	1,230	15	46.0	+ 2.5	77	22	17	12	49	2.91	+ 1.32	2.25	3.0	5	6	15	9	w.	J. M. Mallow.
Maryland.																				
Annapolis	Anna Arundel	45	41	50.0	+ 3.3	77	20	28	11	33	1.70	− 1.48	0.71	0	8	8	6	16	nw.	U. S. Naval Academy.
Baltimore	Baltimore	115	43	49.0	+ 3.2	76	20	29	11	27	1.82	− 1.10	0.98	0	7	12	8	10	sw.	U. S. Weather Bureau.
Cambridge	Dorchester	25	15	51.4	+ 3.7	78	20	28	11	37	1.41	− 1.23	0.68	0	7	18	2	10	nw.	T. E. Keenan.
Cheltenham	Prince George	230	13	47.5	+ 2.9	76	22	24	1	37	2.47	+ 0.05	0.98	0	7	16	5	9	nw.	George Hartnell.
Chestertown	Kent	80	27	49.4	+ 4.0	76	23	30	11	37	1.90	− 0.97	0.95	0	6	16	5	9	sw.	M. W. Thomas.
Chewsville	Washington	530	16	46.2[i]	+ 3.3	76[i]	22	25[i]	11	35[i]	1.17[i]	− 0.79	0.55[i]	0	6[i]	7[i]	7[i]	7[i]	.....	D. Paul Oswold.
Clear Spring	...do	650	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Franz.
Coleman	Kent	80	13	47.8	+ 2.0	75	21	30	11†	32	1.82	− 0.84	0.98	0	5	20	1	9	w.	J. S. Harris.
College Park	Prince George	170	22	44.3[b]	− 0.8	78[b]	19†	21[b]	1	44[b]	1.78	− 1.33	0.82	0	7	13[b]	3[b]	12[b]	nw.	Prof. H. J. Patterson.
Cumberland	Allegany	623	39	45.3	.....	75	20	25	1†	34	2.88	+ 0.57	1.65	T.	9	10	4	16	w.	Francis E. Harrington.
Darlington	Harford	300	22	44.8	+ 1.0	74	20	22	11	36	2.52	− 0.47	1.00	T.	7	14	5	11	sw.	Prof. A. F. Galbreath.
Denton	Caroline	42	18	47.4	+ 0.9	75	20†	24	6	40	0.76	− 2.22	0.47	0	3	18	4	8	w.	H. B. Mason.
Easton	Talbott	35	22	48.4	+ 2.5	75	20	29	1	34	1.64	− 0.99	0.72	0	6	18	3	9	sw.	Henry Shreve.
Emmittsburg	Frederick	720	41	45.2[c]	+ 2.5	73[a]	19	20[c]	10	32	2.00	− 1.40	0.80	T.	5	16	5	9	sw.	James J. White.
Fallston	Harford	450	43	46.8	+ 3.6	73	20†	24	11	31	2.60	− 0.87	0.93	0	8	3	18	9	w.	J. H. Curtis.
Frederick	Frederick	275	38	46.6	+ 2.5	75	19	25	6	38	2.50	− 0.12	1.21	T.	7	16	1	13	se.	Chas. S. Birely.

TABLE 1.—*Climatological data for November, 1913. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Maryland*—Contd.**																				
Frostburg	Allegany	1,929	6	47.6	.....	78	21	20	11	43	3.25	.....	1.25	4.0	10	7	14	9	ne.	R. A. Walter.
Great Falls	Montgomery	200	23	46.7	+ 2.7	75	20†	25	6	40	2.49	+ 0.19	0.82	0	6	17	5	8	se.	Chas. E. Sullivan.
Green Spring Furnace	Washington	450	21	46.1	+ 3.6	75	19	24	1†	38	3.08	+ 0.83	1.62	T.	6	15	2	13	w.	E. G. Kinsell.
Keedysville	do	400	9	45.8	.....	73	19†	20	15	39	2.68	.....	1.45	0	9	15	4	11	nw.	J. A. Miller.
Lake Montebello	Baltimore	200	4	46.8	.....	73	20	27	11	31	1.89	.....	0.81	0	6	19	0	11	nw.	Martin L. Dobler.
Laurel	Prince George	150	19	45.3	+ 0.3	77	20	23	1†	51	2.20	− 0.38	0.95	0	8	18	4	8	.....	Dr. T. M. Baldwin.
Leonardtown	St. Marys	100	3	48.9	.....	76	20	26	11	34	1.38	.....	0.80	0	4	20	2	8	s.	Brother Fidelis.
Monrovia	Frederick	630	28	46.3	+ 2.8	75	19†	22	11	33	2.33	− 1.14	1.08	0	7	18	2	10	s.	J. H. Lawson.
Pocomoke City	Worcester	37	20	51.6	+ 1.6	72	22	34	1†	26	0.69	− 1.66	0.37	0	4	16	7	7	ne.	Hon. R. M. Stevenson.
Princess Anne	Somerset	17	20	48.1	+ 1.7	75	22	25	1	39	0.95	− 1.31	0.60	0	3	11	10	9	sw.	J. R. Stewart.
Rockville	Montgomery	421	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. G. E. Lewis
Salisbury	Wicomico	23	8	48.3	.....	77	20	25	1†	41	0.83	.....	0.34	T.	8	15	11	4	sw.	W. E. Downing.
Solomons	Calvert	20	22	49.7	+ 1.1	75	20	31	11†	26	1.09	− 1.10	0.53	0	5	9	10	11	nw.	Dr. W. H. Marsh.
State Sanatorium	Frederick	1,460	6	45.4*	.....	72c	22	22	11	28c	2.92	.....	1.20	T.	6	16	4	10	nw.	Superintendent.
Sudlersville	Queen Anne	65	15	46.8	+ 0.9	75	20†	27	6	36	2.10	− 0.45	0.98	0	8	17	3	10	nw.	Henry L. Higman.
Tacoma Park	Montgomery	320	15	47.0	+ 2.3	77	20	25	11	37	2.58	+ 0.49	0.68	0	8	2	21	7	.....	L. M. Mooers.
Towson	Baltimore	465	5	47.4	.....	74	20	24	11	38	.....	.....	.....	0	7	15	5	10	nw.	C. W. E. Treadwell.
Van Bibber	Harford	100	16	45.6	+ 1.6	73	20	25	2†	33	1.99	− 1.11	0.70	0	7	16	3	11	.....	W. Benj. Ford.
Westernport	Allegany	1,000	19	47.2	+ 5.2	87	22	22	10	47	2.79	+ 0.98	1.40	0.2	8	.....	.....	.....	.....	Prof. O. H. Bruce.
Westminster	Carroll	860	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. G. F. Morelock.
Woodstock	Baltimore	392	43	48.2	+ 5.4	73	20	27	11	34	2.10	− 0.88	0.77	0	8	10	5	15	w.	Rev. J. F. Dawson, S. J.
Delaware.																				
Delaware City	New Castle	10	6	48.0	.....	74	20	29	11	27	1.72	− 0.47	1.34	T.	4	21	1	8	nw.	H. Morton Price.
Dover	Kent	40	25	48.9	+ 5.6	78	22	28	1†	38	1.83	− 1.57	1.15	0	5	17	4	9	w.	W. C. Josting.
Milford	do	20	29	47.2a	+ 1.7	76a	20	28a	1†	33a	1.17	− 1.97	0.77	0	7	16a	4a	9a	nw.	Chas. J. Holzmuller.
Millsboro	Sussex	20	21	50.7	+ 4.2	79	20†	28	1†	42	1.40	− 1.27	0.70	0	5	20	3	7	sw.	Rev. L. W. Wells.
Seaford	do	40	22	47.8	+ 1.6	75	20	27	1	38	1.17	− 1.47	0.56	0	6	21	3	6	sw.	E. B. Brown.
Wilmington	New Castle	86	2	48.8	.....	74	20	30	11	27	1.97	− 1.13	0.95	0	6	20	4	6	nw.	Alexander J. Taylor.
District of Columbia.																				
Washington	Dist. of Columbia.	.....	....	47.8	+ 2.8	76	20	28	11	35	2.20	− 0.51	0.97	0	8	13	6	11	nw.	U. S. Weather Bureau.
Virginia.																				
Culpeper	Culpeper	450	5	44.2	.....	72	20	20	11	37	2.57	.....	1.26	0	4	15	6	9	s.	Col. H. C. Burrows.
Dale Enterprise	Rockingham	1,350	34	45.1	+ 1.3	75	20	16	12	40	4.60	+ 2.34	3.00	T.	6	9	11	10	s.	Rev. L. J. Heatwole.
Eastville	Northampton	15	3	51.4	+ 1.5	76	21	30	3†	38	1.48	− 1.38	.69	0	4	19	6	5	sw.	T. B. Robertson.
Fredericksburg	Spottsylvania	100	24	48.6	+ 2.1	81	20	21	12	39	1.78	− 0.50	.68	0	7	18	3	9	se.	S. G. Howison.
Lincoln	Loudoun	500	12	46.1	+ 1.9	76	19†	24	3†	40	2.55	+ 0.67	1.20	0	5	17	3	10	sw.	Dr. Geo. Roberts.
Mount Weather	do	1,756	9	44.0	+ 3.6	69	20†	20	11	25	2.25	− 0.61	1.39	T.	8	8	8	14	nw.	U. S. Weather Bureau.
Quantico	Prince William	16	16	46.2	+ 1.5	77	20†	20	10†	32	1.18	.....	.58	0	3	21	1	8	ne.	Rich , Fdksbg. & Pot. R. R.
Staunton	Augusta	1,380	21	47.6	+ 2.2	76	22	21	11†	39	3.74	+ 1.60	2.90	.5	8	12	7	11	sw.	Ernest Nothnagel.
Swetnam	Fairfax	300	1	.....	.....	.....	.....	.....	.....	.....	2.56	.....	1.12	0	5	17	5	8	.....	Potomac Electric Power Co.
Wachapreague	Accomac	15	1	51.2	.....	72	23	29	11	34	1.03	.....	.45	0	3	.....	.....	.....	.....	Mrs. A. H. G. Mears.
Warsaw	Richmond	160	21	51.1	+ 4.6	79	20†	25	2	50	2.70	+ 0.17	1.55	0	3	13	11	6	.....	C. H. Constable.
Waynesboro	Augusta	1,315	1	47.8	.....	72	19†	23	12†	32	.....	.....	.....	0.5	....	21	1	8	w.	H. M. Magie.
Winchester	Frederick	717	2	47.4	.....	74	19†	24	12	34	3.55	.....	2.25	0	4	14	3	13	w.	Bentley Kern.
Woodstock	Shenandoah	927	17	47.2	+ 2.5	78	22	21	12	43	3.44	+ 1.55	2.48	T.	9	16	4	10	w.	Mrs. A. G. Artz.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow

TABLE 2.—*Daily precipitation for November, 1913. District No. 1, North Atlantic States.*

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Maine.																																
Ashland	St. John										.40				.05					T.	.50							T.		T.	.05	1.00
Cambridge	Kennebec				.21					.42	.50				.14					.20	.47								.34			2.28
Cornish	Saco				.10				.07	2.45				T.	.11					.20				T.	.01	T.			.05	.40		3.48
Danforth	Penobscot				.30						.35				.15					*	.72								1.00			2.52
Eastport	Coast				.09	.01				T.	.08				.18					.10	.43		T.	T.	.01		T.			T.		0.90
Eustis	Kennebec	T.	T.	T.	.07	.03				.10	1.05	.01	T.		T.	T.				*	.68		T.	.02		.05	T.			.30	.02	2.33
Fairfield	do									.30																				.35		0.65
Farmington	do				.12				.01	.66	.44				.08					.09	.51					T.				.40		2.31
Gardiner	do				.08				.02	.42	.52				.11						.47					.04				.27		1.93
Greenville	do	T.			.10				.05	1.35	.30	T.		.02	T.					.66				.10	T.	T.	T.		.10	.30		2.98
Houlton	St. John				.10						.55	.05			.08						.43								.05			1.26
Howe Brook	Penobscot	.20					.20	.18		.16										.20							.12			.10		1.16
Lewiston	Androscoggin				.07				T.	1.16					.09					*	.45			T.						.37		2.14
Madison	Kennebec				.20				.17	1.52	.04				.16					.87									.24			3.20
Millinocket	Penobscot			.20					.02	.39		T.		.03	.07					.68				.01		T.			.16	.06		1.62
North Bridgton	Saco				.34					.67					.04					.36			.01							.36		2.78
Oquossoc	Androscoggin				1.00						.80				T.					.75			T.		T.					.02		2.57
Orono	Penobscot				.18					.65					.60	.70					.76						T.				.50		3.39
Patten	do																			T.									.20			0.20
Pemaquid	Coast		T.		.10				T.	.15	.10			T.	.07						.54				.01					.40	T.	1.37
Portland	do				.06				.05	.30					.10					.08	.15				T.				.08	.38		1.20
Presque Isle	St. John	T.				T.					.45										.05			.04			.07			.10		0.71
Rumford Falls	Androscoggin				.08				.06	1.74	T.				.03					.41	.07				.02				.38	T.		2.69
The Forks	Kennebec																															
Van Buren	St. John		.05		.22						.15	T.			.02				T.		.02			.04			.10			.02		0.62
Winslow	Kennebec				.10					*	.73				.15					.50										.20		1.68
New Hampshire.																																
Alstead Center	Connecticut			T.	.08				.11	.41	.15			T.	.15		T.	T.		T.	.11				T.				.05	.75		1.81
Benton	do																															
Bethlehem	do			T.	.23				.03	.16	.27				.17					.12	.35			.05	.03	.08				.13		1.62
Brookline	Merrimack				T.					1.10				T.	.08		.06			20									*	1.10		2.54
Concord	do				.10				.02	.63		T.		T.	.12			T.		.06	.06				.03	T.	T.		.30	.44		1.76
Durham	do					.02				.48					.11					.24										.03		0.88
Franklin	do				.10				.06	.43	.31			.03	.10					T.	.19				T.	.03			.02	.59		1.86
Grafton	do																															
Hanover	Connecticut				.09				.15	.80	.05	T.			.07					.01	.25			.01	.01	.01			.10	.30		1.85
Keene	do				.09				.09	.30				T.	.17		.02	.04		T.	.11				T.				T.	.60		1.42
Nashua	Merrimack				.02				.02	.74	.11			.02	.13		T.	T.			.15				T.	.01			T.	1.09		2.29
Newton	do				.01				T.	.64				.01	.09		T.			.20				.03				T.	1.03	T.	2.01
Plymouth	do				.06				.11	.84	.34		T.	T.	.05					T.	.60			T.		T.			T.	.46		2.46
Vermont.																																
Bloomfield	Connecticut				.11					.15	.05				.03					.01	.55			.05	.04	.08				.12		1.19
Cavendish	do																															
Chelsea	do				.15				.16	.50	.38	.04			.03					.15	.29			T.	.05				.08	.32		2.15
Manchester	Hudson				.09					.91	.29	.15		T.	.65		T.				.31			.19	T.		T.		T.	.28		2.87
Somerset	Connecticut	T.			.28				.13	3.64	.13	.06		T.	.16		.11	T.		.03	.86			.12	.03				.10	.77		6.42
St. Johnsbury	do				.07					.03	.21	T.			.04					T.	.50			.08	T.	.09			T.	.23		1.25
Vernon	do				.06				.16	.70		T.		T.	.05		.05			.12	.14				T.				.50	.03		1.81
Woodstock	do		.16							.70		T.			.09					.51					T.			*	.46			1.92
Massachusetts.																																
Amherst	Connecticut			T.	.05				.13	.65				T.	.12		.20			.04	.11				T.				.12	.69		2.11
Ashland	Merrimack				.06				*	*	.92				.06		.26			.19										*	1.16	2.65
Bakers Bridge	do									.45	.45						.23				.10									1.21		2.44
Bedford	do				.04				.06	.59				T.	.09		.17	T.			T.				T.					1.09	.03	2.07
Blue Hill	Coast				.03				T.	.57	.05				.10		.28	.05			.22			T.	T.	.01	T.		T.	1.27	.12	2.70
Boston	do				.01				T.	.43					.06		.20				.16			T.	T.		T.		T.	1.29	T.	2.15
Chestnut Hill	do				.05				.18	.61					.10		.25			.20					T.				.65	.65		2.69
Clinton	Merrimack				.06				*	.86					.13		.20				.21									1.25	.02	2.73
Concord	do				.04				.04	.53	.03			T.	.06		.18	T.			.12				T.	T.			T.	1.11	T.	2.11
Fall River	Coast				.01				.01	.38	.01				.02		.50				.20								1.05	.05		2.23
Fitchburg	Merrimack				.05				.02	.88	.06			T.	.05		.05	T.		T.	.29								.86	.04		2.30
Framingham	do				.04				*	.80					.06		.23				.17									*	1.14	2.44
Haverhill	do				.01					.17	.23			.02	.10	T.	T.	T.			.16				T.	.06				1.07	.01	1.83
Hingham	Coast				T.					.55	T.				.06		.26				.19				T.			T.		1.36		2.42
Hyannis	do									.05	.04				.10	.10	*	.39			.18				.02					.90		1.78
Jefferson	Merrimack				.05				*	1.00					.19		.08				.34									.98		2.64
Lake Cochituate	do				.04				*	.65					.06		.20			.17										*	1.11	2.23
Lawrence	do				.04				.03	.56				.01	.17		.03			T.	.20				.04				T.	1.05	T.	2.13
Leominster	do				.04				.02	.85	.05				.01		.12				.22								.04	1.11		2.46
Lowell	do																															
Middleboro	Coast				T.				T.	.50	.01				.04		.38				.20				T.					1.33	.01	2.47
Nantucket	do				.01					.07	.10	T.			.07		.55				.08				.04	.22	T.	T.	T.	.76	.01	1.91
New Bedford	do																															
Norfolk	do				T.					.87	.15				.08		.27	.09			.17									1.37	T.	3.00
Plymouth	do				T.				.23	*	.22				.17		.62				.22				.05					1.28		2.79
Princeton	Merrimack								*	1.13					.15		.18				.19									1.25		2.90
Provincetown	Coast									T.	.12				T.		.32				.36					.18				1.23		2.21
Rockport	do								.05	.17					.08		.05				.24									.96		1.55
Rutland	Connecticut	T.			.06	.14			.02	.23	.99		T.	T.		.09	.02	.16			T.				T.		T.			.64	.38	2.73
Somerset	Coast				T.					.31	T.				.05		.39			.22										1.02		1.99
Spot Pond	do			.01	.03				*	.56					.08		.21			.19				.03					*	*	1.34	2.45
Springfield	Connecticut			.03				T.	.23	.43				T.	.10	.15	.24			.20			T.	T.	T.				.63	.20		2.21
Sterling	Merrimack								*	.85					.05		.15				.11									1.19		2.35
Taunton	Coast				T.					.65	T.				.09		.39				.25			T.	T.					*	1.58	2.96
Turners Falls	Connecticut	.18								1.10				.03	.06			.10	.03	.12					.02					1.35		2.99
Westboro	Merrimack				.05				*	*	.85				T.				.30	.20										*	1.35	2.75
Williamstown	Hudson				.14				.05	.55	.01	T.			.12		.05	T.		.15	.35			.05	.03		T.			.01	.12		1.63
Winchendon	Connecticut			.10					.08	.96				.03	.11		.12			T.	.26									.06	.72		2.44
Worcester	Coast				.13				.11	.97		T.			.05		.14			T.	.19			T.	T.					.02	.59	T.	2.20

TABLE 2.—*Daily precipitation for November, 1913. District No. 1*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Rhode Island.																																
Block Island	Coast				T.					.39					.61		.69				.16							T.	.99		2.24
Bristol	do				.02					.26					.03		.38				.16				T.				.97		1.82
Greene	do				.04					.81	.14				.10		.45				.23								.77		2.54
Hope Valley	do				T.				T.	.62	.04				T.		.37				.41		T.	T.					.89		2.33
Kingston	do				T.					.60					.02		.43				.23								1.20		2.48
Narragansett Pier	do				.01				.02	.78	T.				.03		.50	.13			.23				T.			T.	1.25	.04	2.99
Pawtucket	do				.01					*	.58				.07		.39				.20			T.	T.				*	1.13	2.38
Providence	do				T.				.01	.41					.04		.30				.17				T.			.01	1.02		1.96
Wallum Lake	do																															
Connecticut.																																
Bridgeport	Coast				.04				.37	.63					.06		.70	.08			.16		.02	T.	T.			T.	.55		2.61
Canton	Connecticut								.96	1.23					.05		.32				.28			T.	T.				.88		3.72
Colchester	Coast				.15				.05	.74	T.				.23		.40	.14			.24								.85		2.80
Cream Hill	Housatonic				.15					1.70					.22		.24			.29					.07			.05	.51		3.23
Danielson	Coast				.04				.05	2.00					T.		.45				.30								.91		3.75
Falls Village	Housatonic								.20	1.54					.25		.32			.36								.02	.54		3.23
Hartford	Connecticut				.03				.11	.57				T.	.08		.33			T.	.18			T.				.02	.80	T.	2.12
Hawleyville	Housatonic								.24	1.65	.08				.21		.21	.25			.23							.63			3.50
Lake Konomoc	Coast										.10							.70											1.05	.10	1.95
New Haven	do				.04				.26	.70	T.				.09		.63				.15		T.	T.	T.		T.		.87		2.74
New London	do				T.				.02	.70					.06		.90	.20										.09	1.02		2.99
N. Grosvenor Dale	do				.06				.29	1.05					.06		.39				.33								.85	.10	3.13
Norwalk	do				.03				.20	.67					.05	.82					.12								.46		2.35
Southington	do				.05				.10	1.15					.05		.35	.20		T.	.15			T.	T.				.80	T.	2.85
South Manchester	Connecticut					.01			.02	.93					.04		.22			.09	.13							.08	.71		2.23
Storrs	Coast									1.30					.05					.70								T.	T.		2.05
Torrington	Housatonic									.88	1.00									.78								.20	.60		3.46
Voluntown	Coast										.68				.08			.67			.27								.60		2.30
Wallingford	do			.05					.21	.58					.12		.56			.22				T.				.46	.50		2.70
Waterbury	Housatonic				.06				.25	1.30					.12		*	.41			.18			T.	T.		T.		T.	.60		2.92
New York.																																
Addison	Susquehanna			T.					T.	1.62	.01		.17	.22		.13	.06			T.	T.			T.	T.	T.		T.	.06	.09		2.36
Albany	Hudson	T.			.03				.07	.43	T.			T.	.15	T.	.12			.17	.04			T.	.08				.07	.32		1.48
Alfred	Susquehanna	.03		.01	.11	.01				.50	1.17	.03	.01	.03	.22		.05		T.	.02	.06	.02		.09	.10		T.	.03	.02	.06		2.57
Amsterdam	Mohawk				.30					2.30					.25					.10	.50			.10					.50			4.05
Athens	Hudson			T.	T.				.10	.36	T.		T.	T.	.16		.36			T.	.06			T.	.03		T.		.04	.42		1.53
Bainbridge ‖	Susquehanna									.62		T.		T.	.40	.10	.20			.23						.07			.12		1.74
Ballston Lake	Hudson			T.	.26					*	.62	.01		T.	.20		.04	T.		.07	.45			.02	.05		T.		.10	.50		2.32
Bedford	Coast				T.			.08	.62	.74	T.				.20		.75				.15				.08				.28	.75		3.65
Beerston	Delaware				.13					3.38	.05	T.		.08	.20		.25				.18			.04	.07		T.		.02	.30		4.70
Binghamton	Susquehanna			T.	.05				.01	1.68	T.	T.		.08	.22		.17		T.	.11				T.	.12		T.	T.	.04	.09		2.57
Bouckville	do			.07	.18					1.60	.15	.10		.21	.12		.10			.04	.20			.05	.11		.03		.11	.10		3.17
Carmel	Hudson				.04					1.44					.17		.65			.19				.02						.63		3.14
Chatham	do				.03				.03	.57	.10			.10	.22		.10	T.		T.	.22			.02	.07				.01	.44		1.91
Cooperstown	Susquehanna		.14	.03					1.03	.72	.07	.07		.10	.18		.02			.50				.11	.30				.42			3.69
Corinth ‖	Hudson				.06					.50	.68										.52								.55			2.31
Cortland	Susquehanna				.07					1.53	.26	.04		.14	.17		.06			.10	.54				.06	.01	.01		.03	.04		3.06
Cutchogue	Coast				.05					.54	T.	T.			T.		.75	.02			.22									.65		2.23
De Ruyter	Susquehanna	.06			.17					1.41	.02	.04		.25	.23		.12			.17	.46			.04	.07		.02		.05			3.11
Elmira	do									1.74	T.			.02	.35		.04			T.				T.	T.		T.	T.	T.	.15		2.30
Glens Falls	Hudson			T.	.05				.08	.34	.28				T.		T.			.05	.30	T.			T.				.08	.34		1.52
Gloversville	Mohawk				.48				T.	2.30	T.	.25		.02	.05		.04			.10	.80			.02	.16				.10	.34		4.66
Greene ‖	Susquehanna	.08								.80	.65				.37		.15	.25								.35				.18		2.83
Greenfield Center	Hudson			.05	.13					.80	.05	.06			.11					.54					.05					.50		2.29
Hancock ‖	Delaware				.08					1.79	.94				.15			.31			.12				.02			.33				3.74
Haskinville	Susquehanna			T.					T.	1.85				.10	.13					.10	.05	.04				.08		T.		T.			2.35
Hoosick Falls	Hudson			T.	.24	.11				.29	.36	T.			.30	.04	.06				.37				.06	.04				.36	.10	2.33
Indian Lake	do								.20	2.25	.50	.03								.30	.50								.12			3.90
Jeffersonville	Delaware				.06	T.			T.	3.04	.06			.08	.17		*	.48			.14				.09		T.		.13	.26		4.51
Liberty	do							2.98	1.70			T.	T.	.05	.17	T.	T.			.68				T.	T.					.25		5.83
Little Falls	Mohawk				.22					2.40	T.	.06		.12	.03		T.			.13	.08					.03			.02	T.		3.09
Mechanicsville ‖	Hudson				.32				.08	.71					.25		T.			.49									.59	T.		2.44
Mohonk Lake	do								.40	1.90								.70														3.00
Morehouseville	Mohawk				.05					1.72	.70	.26		.10	.22					.45	1.05				.07				.32	.25		5.19
Morrisville	Susquehanna																															
Mount Hope	Coast								1.33												.31								1.82		3.46
Mount McGregor	Hudson																															
Newark Valley	Susquehanna									1.40				.26	.30		.18			.04	.06			.08	.20					.09		2.61
New Berlin ‖	do				.18	.02				1.30	.45		T.		.04	.12	T.				.49			.06		.14			.02	.49	T.	3.31
New Lisbon	do				.07				.08	2.56	T.				.32		.11			.04	.33			.05	.07					.37		4.00
New York City	Coast				T.				.35	.46				T.	T.	T.	.62	.11			.04		T.		T.				T.	.33		1.91
North Creek	Hudson			*	.61				*	*	2.01																		.30			2.92
Northville ‖	do			.20					1.93	.90		.15				.05				.60									.50			4.33
Norwich	Susquehanna																															
Oneonta	do			T.	.09					2.99	T.	T.		T.	.44		.06				.43				.07	.01			.05	.26		4.40
Oxford	do			.05						1.91	.05	T.		.12	.45		.30							T.	.50	T.	T.		.08	.15		3.61
Oyster Bay	Coast									.55							.51	.24												.48		1.78
Port Jervis	Delaware				.08				.16	2.23	.02			T.	.16		.42	.22	.01	T.	.04				T.		T.		.07	.38		3.79
Roslyn	Coast								.11	.58					.01		.58	.22			.11		T.	T.				T.	.54		2.15
Salisbury	Mohawk			.02	.48					2.72	.06	.14		.26	.04					.18	.07			.03	.04		.04		.12	.04		4.24
Scarsdale	Coast								.25	.52					T.		.50	.35				T.					T.	.45	T.	.45	T.	2.52
Setauket	do				.03				.13	.82	.03				.10		.68	.04			.13			T.			T.		T.	.60		2.56
Sharon Springs	Mohawk			.06	.18	.06			T.	1.84	.25	T.			.35	.08				.06	.32			.10	.04				T.	.36		3.70
Sherburne ‖	Susquehanna				.10					1.20	.62	T.		T.	.12	.12					.66					.20	T.			.37		3.39
Southampton	Coast				.01				T.	.41	T.				T.			.42	.28			.17		T.	T.		T.		T.	.74		2.03
South Edmeston	Susquehanna				.22				T.	1.90	T.			.10	.20		.21			.07	.31			.35	.13				T.			3.49
Spier Falls	Hudson				T.				.32	.53		T.		.03	T.	T.				.38									.53	T.		1.79
Trenton Falls ‖	Mohawk			.02	.35	.05				1.25	.48	.03	.13		.02	.05				T.	1.15	T.			.01	.10		T.	T.	.35		3.90
Tribeshill ‖	do				.50					2.60					.60					1.80									.20			5.70
Troy	Hudson		*		.11					*	.26				.10	.07	*	.10		.07	.27			*			.05		*	.30	*	1.33
Utica ‖	Mohawk				.35					.97	1.03	.17									.88									.33		3.73
Wading River	Coast									.74					.02		.85				.19				T.					.83		2.63
Wappingers Falls	Hudson				.08					.28	.82	T.					.18	T.	.72	T.	.21			T.	.10			T.	.08	.52		2.99
Warwick	do				.03			.50	1.90						.16		.62	.10			.08								.12	.30		3.81
Waverly	Susquehanna				.05					1.95	.10	T.		.10	.24		.15				.02			.01	.07	T.		.01	.05	.13		2.88
West Berne	Mohawk								.35	1.75				T.	.10		.20			.06				.03	.01				.05			2.55
West Point	Hudson				.09					1.81					.19	.07	T.				T.				T.					T.	T.		2.16
Windham	Mohawk				.10				.04	4.15	.07	T.		.03	.11		.32	.08		.02	.21			.05	T.		T.		T.	.43		5.61

TABLE 2.—*Daily precipitation for November, 1913. District No. 1*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Pennsylvania.																																
Allentown ‖	Lehigh				.02					1.40				.01	.02		.53	.28									.03	.20	.28	.02		2.79
Altoona	Susquehanna				.02				.08	1.56	.27			.08	.04	.03	.47							.03				.16	.05	.27	.02	3.08
Ansonia ‖	do									.74	1.02	T.	T.	T.	.08	T.	.31	.04						.03		T.		T.	.04	.15		2.41
Austin	do	T.			.12				.55	1.00	T.	T.		.30	.15		.30			.10				.15					.25			2.92
Bethlehem	Lehigh								.06	1.61					.06		.78				.17						.02		.15	.20		3.05
Bloserville	Susquehanna								T.	.90	.01	T.		T.	.05	.04	.38	.02	T.		T.							.11	.20	.33		2.04
Browers Lock	Schuylkill								*	1.05						*	.84											.58				2.47
Catawissa	Susquehanna				.02				.03	.89	.13			.04	.20	.05	.31		T.	.06					T.			.07	.24			2.04
Center Hall	do								.50	1.50	.10	T.		.50	.15	.05	.12								T.		T.	.03	.05			3.00
Clearfield	do				.07				.16	1.95	.02	.01		.50	.30	.03	.01			.01	.02			.02	T.		.03	.15	.05	.10		3.43
Coatesville	Coast									.61	T.				.02	.04	.97											.04	.36	.37		2.41
Doylestown	Schuylkill								.26	1.55								.77											.17			2.75
Drifton	Susquehanna								.50	1.60	.25	T.	T.	.05	.21		.53				.10						.03	.06	.03	.37		3.73
Emporium	do			T.	.11				.11	1.61	.05	T.		.61	.22	.06	.20		T.	.03	.08			.14	T.		.08	.10	.08	.04		3.52
Ephrata	do								.01	.54					.02	.01	.56												.03	.26		1.43
Everett	Juniata								.15	1.95	.10			.25		.20	.55										.09	.21	.30	.10		3.90
Forks of Neshaminy	Delaware									2.31							.88												.41			3.60
George School	do								.10	2.05		.04					.70	.10											.10	.30	.03	3.42
Gettysburg	Potomac									.68	T.			.06	.02	.15	.68						.02				.10	.25	.13		2.09
Girardville	Susquehanna				T.				T.	1.55	.16	T.		T.	.18	.04	.40		T.		.07				T.		.05	.13	.29	T.		2.87
Gordon	do								T.	1.30	.14				.11		.42	.02			.06				T.				.30	.27		2.62
Hamburg	Schuylkill									.17	.19				.19	.69												T.	.19			1.43
Hanover	Susquehanna									.72				.10	.03	.14	.77	.01										.05	.27	.15		2.25
Harrisburg	do								T.	.73	T.			T.	.03	.02	.46		T.		T.						T.	.06	.28	.10		1.68
Huntingdon	Huntingdon								.18	1.60	.03			.09	T.	.07	.47										T.	.12	.02	.33		2.91
Hyndman	Potomac								.31	T.	.03				.89	1.04	.70											.41				3.38
Kennett Square	Coast									.51		T.	.12				.92								T.		T.	T.		.65		2.20
Lancaster	Susquehanna								T.	.59	T.			.02		T.	.78											T.	.20	.30		1.89
Lansdale	Schuylkill								.10	.56	.49				.11		.79												.13			2.07
Lawrenceville	Susquehanna			.05						1.60	T.	T.		.30	.25		.15				T.			.05	T.			T.				2.40
Le Roy	do				.10					1.80	.05	.01	.02	.03	.20	.01	.35				.06			.01	.06		.01	.04	.07	.14	.01	2.97
Lewisburg	do									.79	.20			.15	.12		.31										.01	.04	.36	.25		2.23
Lloyd	do									1.87	.01	T.	.01	.17	.10		.22				T.			T.	T.			.02	.01	T.		2.41
Lock Haven	do								.19	1.00	T.	T.	T.	.24	.14	T.	.21			.02	.01			T.	T.		.04	.04	.04	.28		2.21
Marion	Potomac								.21	1.21				.10		.18	.78											.12	.15	.17		2.92
Mauch Chunk	Lehigh				.02				.18	1.75	.03			T.	.08		.44				.26							.03	.17	.24		3.20
Mifflintown	Juniata									2.42	.01	.01			.09		.32				T.							.06	.15	.27		3.33
Milford	Delaware				.03				.05	1.79	.05				.14		.45	.12				.04		.02	T.	.02			.09	.45		3.25
Montrose	Susquehanna				.08					1.60	.08	T.		.05	.40		.10			.02				T.	.04			T.	.08			2.45
Mountain House	Juniata								.65	1.60				.04			.84											.15	.08	.22		3.38
Mount Gretna	Susquehanna								.07	.97	T.	T.			.02	.03	.68	T.		T.	T.				T.		T.	.03	.25	.20		2.25
Muncy Valley	do								.23	.91	.10			T.	.35	.22					T.							.22				2.03
Ottsville	Delaware								.03	2.50	.03						.83				.08								.13	.25		3.85
Philadelphia	do				T.			T.	.65	.61			T.	T.	.01	.01	.94				.01				T.		T.	T.	.12	.50		2.85
Pocono Pines	do									1.80	2.00														.10			T.	.30			4.20
Point Pleasant	do								.29	2.37							.72												.11	.28		3.77
Pottsville	Schuylkill								.04	1.93				.01	.10	.04	.47				.02						.03	.05	.29	.29		3.27
Reading	do				T.				.05	.94	T.			T.	T.	.05	.66		T.		T.				T.		T.	.09	.32	.09		2.20
Renovo ‖	Susquehanna				.13					.70	1.35	T.	.06	.20	.17	T.	.06	T.		T.				T.		T.		T.	.06	.42		3.15
Scranton	do				.01				.12	1.52	.02	T.		.02	.35	.02	.40		T.	.03	.01				.03		T.	T.	.01	.29		2.83
Seisholtzville	Schuylkill									1.24							.79												.40	.27		2.70
Selinsgrove	Susquehanna				.02				T.	1.22	.10			.10	.15		.24				T.							T.	.22	.21		2.26
Shawmont	Schuylkill								.12	.81						.10	1.00	.65											.15	.35		3.18
Shippensburg ‖	Susquehanna									.66	.46				.02		.46	.20										.01	.06			1.87
Smiths Corners	Schuylkill									2.23							.78												.20	.31		3.52
Spring Mount	do									.02	.76					.02	.74				.01								.10	.25		1.90
State College	Susquehanna								.40	1.72	.02	T.	T.	.25	.09	.05	.04	T.			.01				T.			.10	.10	.27		3.05
Stroudsburg	Delaware				.02				.09	1.74	.06			.01	.06		.46	.05											.22	.56		3.27
Sunbury	Susquehanna				.02				.02	.66	.04			.05	.03	.01	.22			T.	.04				T.			T.	.28	.18		1.55
Towanda	do			T.	.06					1.53	.05	T.		.06	.20		.31			.01	.02				.03		.02	T.	.04	.18		2.51
Weikert	do									1.08	.23			.21	.04		.21											.20	.42			2.39
West Chester	Coast								.02	.97					.01	.03	.97											.03	.26	.45		2.74
Wilkes-Barre ‖	Susquehanna									.92	.48	.02			.07	.18	.17	.24												.18		2.26
Williamsport ‖	do									.53	1.00			.03	.15	.05	.10	.12			.01								.13	.16		2.28
New Jersey.																																
Asbury Park	Coast				T.				.05	.26						T.	.66				.02				T.		T.	.01	T.			1.00
Atlantic City	do				T.				.21	.73					T.	.06	1.19	T.			T.						T.	.03	.03	.06		2.31
Bayonne	do				T.				.36	.55							.65	.09			.07				T.				.01	.32		2.05
Belvidere	Delaware								.07	2.57							.37	.10							.05				.15			3.31
Bergen Point	Coast				T.				.32	.50						T.	.76	.12							.09		T.	T.	T.	.36		2.15
Boonton ‖	Passaic				T.				T.	1.12	.62				.01	T.	.13	.50			.04		T.			T.			T.	.47	T.	2.89
Bridgeton	Coast				T.				T.	.90			T.			.60	.45											.05	.10			2.10
Burlington ‖	Delaware								T.	1.03	1.15						.33	.65			.03								.01	.41		3.61
Cape May City	Coast				.01			.10	.40							.23	.45										T.	.05	.05	.03		1.32
Charlotteburg	Passaic								*	3.47					.10	*	.72												*	.60		4.89
Chatham ‖	do									.70	.65					T.	.15	.70			.10					T.				.55		2.85
Clayton	Coast				T.				T.	.85				T.	T.		1.05											T.		.45		2.35
Culvers Lake	Delaware				T.				.24	2.44	.05			T.	.10		.40	.13			.03				.01				.02	.36		3.78
Dover	Passaic				.01				*	1.78							.78												.60	.02		3.19
Elizabeth	Coast				.01				.08	.57			T.		T.		.64	.13		T.	.08		T.		T.		T.	T.	.04	.32		1.87
Flemington	do				T.				.29	1.49	T.				.03		.77	.12		T.	.07					T.	.02	T.	.14	.30	T.	3.23
Haddonfield	Delaware				.01				.31	1.16				T.	.02	.03	.90	.07			.01		T.		T.		T.	.03	.10	.47	T.	3.11
Highwood	Coast				.02				.11	1.00	T.	T.			T.		.51	.20			.02				T.				T.	.37	T.	2.23
Imlaystown	Delaware								.15	.50							.85				.05					T.	T.		T.	.25		1.80
Indian Mills	Coast				.03				.20	1.02	.04			T.	T.	T.	.87	.05									T.	T.	.12	.46		2.79
Jersey City	do				T.				.20	1.06		T.			T.	T.	.57	.33			.06				T.		T.	T.	T.	.38		2.60
Lakewood	do				T.				.20	.51							.93	.04			T.				T.		T.	.05	.06	.27	T.	2.06
Lambertville	Delaware								.08	1.73					T.		.67	.12			.03								.08	.31		3.02
Little Falls	Passaic			.03					.60	.95					.03		.70	.03			.04				T.				.05	.39		2.82
Long Branch	Coast				T.				.82	.08					T.	T.	1.28	.09			.02				T.		T.	.02	.03	.32		3.66
Mahwah ‖	Passaic									1.82	.75					.10	.15	.65												.20		3.67
Moorestown	Delaware								.08	1.62	.05						*	.93											*	.43		3.11
Newark	Passaic								.53	.50	T.					.01	.79	.14							.06				.03			2.06
New Brunswick	Coast				T.		T.		.16	.60	.14						.25	.56			.05				.02		T.	.30	.12			2.20
Newton	Delaware									2.96	T.						.74	.09			.05				T.				.01	.39		4.24
Northfield	Coast								.15	.62						.03	1.24	.06										.04	.04	.06		2.24

TABLE 2.—*Daily precipitation for November, 1913. District No. 1*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
***New Jersey*—Contd.**																																
Paterson	Passaic				T.				.08	1.63	T.			T.	.03		.50	.23			.05			T.	T.			.03	.41		2.96
Phillipsburg	Delaware				T.				.06	2.28	.04				.02		.82	.08			.04					T.	.04	.13	.34		3.85
Plainfield	Coast				.04				.78	.77	T.				.01	T.	.80	.04		T.	.07				T.		T.	T.	.11	.29		2.91
Pleasantville	do								.08	.77						.01	1.12	.01									.05	.06	.07		2.17
Pompton Plains ‖	Passaic				T.					1.28	.68				.02	.02	.19	.69			.05					T.		T.	.48		3.41
Somerville	Coast								.12	.88	.02				T.		.71	.90							T.	T.	.12	.29	.10		3.14
South Orange	do				.02				.18	.65	T.				T.		.41	.03		T.	.06				T.	T.	.05	.31	T.		1.71
Sussex	Hudson								.60	1.89							.41	.21		.06								.48			3.65
Trenton	Delaware				T.				.45	.80					T.	T.	.83	.02		T.	.03				T.		T.	T.	.07	.28		2.48
Tuckerton	Coast								.26	.59							1.02	.07										.38	T.		2.32
Vineland	do				T.				.13	.61							.49	.12							T.			.08	.04		1.47
Woodbine	do								.05	.50	1.23	.02															.02	.05	.10	.05		2.02
West Virginia.																																
Bayard	Potomac	T.							.18	1.80	1.20	.40		.16	.46	.73	.89	.05	T.		T.			.10			T.	.23	.11	T.	T.	6.31
Burlington	do							*	2.15		T.					*	.80											T.	.10	.05	.03	3.13
Harpers Ferry ‖	do									1.52	.20					.05	.90												T.	T.		2.67
Lost City	do								2.00	.50		T.			.02	.30	T.										.15	.10		T.	3.07
Martinsburg	do								*	1.78				.05	.10	*	.90									*	*	.21			3.04
Moorefield	do								.19	1.99	T.	T.		T.		.25	.75										.25	.49	.21	T.	4.13
Upper Tract	do								.20	2.25	T.				T.	.20	.16								T.			T.	.10	T.		2.91
Maryland.																																
Annapolis	Coast								0.3	.71					.08	.10	.35										T.	.04	.31	.08		1.70
Baltimore	do									.46			T.	T.	.02	.20	.84										.01	.07	.22			1.82
Cambridge	do									.68						.09	.27	.03									.05		.24	.05		1.41
Cheltenham	do									.98						.07	.65										.02	.02	.35	.38		2.47
Chestertown	do								T.	.50					T.	.20	.95	.02									T.	T.	.18	.05		1.90
Chewsville	Potomac													T.	.07	.55	.35		.01	T.							T.	.04	.15			1.17
Clear Spring	do																															
Coleman	do									.57				T.	T.	.10	.98										T.	.07	.10			1.82
College Park	do									.82				.08	T.		.42	.07										.05	.21	.13		1.78
Cumberland	do	T.								1.65	.06	T.	T.		.06	T.	.80	.09								T.		.11	.07	.02	.02	2.88
Darlington	Coast								.10	.57	T.				T.	.15	1.00	.02									T.		.54	.14		2.52
Denton	do								.05	.47						T.		T.									T.	T.	.24			0.76
Easton	do									.57						.09	.72	.01											.16	.09		1.64
Emmitsburg	Potomac										T.	T.				.80	.30											.30	.10	T.	.50	2.00
Fallston	Coast								T.	.93				T.	.05	.22	.77	01								T.	.07	.42	.13			2.60
Frederick	Potomac									1.21	T.			.04	.09	.34	.58			T.						T.	.06	.18	T.	T.		2.50
Frostburg	do								.20	1.25	.31			.05		.34	.73										.23	.05	.06	.03		3.25
Great Falls	do									.74				.09		.12	.58											.82	.14			2.49
Green Spring Furnace.	do								.19	1.62						.30	.76										.15	.06				3.08
Keedysville	do				T.				.03	1.45				.03	.10	.30	.58		T.								.03	.09	.07	T.		2.68
Lake Montebello	Coast								T.	.57					T.	.27	.81	T.									T.	.07	.14	.03			1.89
Laurel	do									.60				.05	.07	.23	.95											.08	.17	.05			2.20
Leonardtown	do									.80							.12										.01	T.	.45				1.38
Monrovia	Potomac									1.08				T.	.07	.23	.73											.02	.17	.03			2.33
Pocomoke City	Coast									.37						T.	.13										T.	.01	.18				0.69
Princess Anne	do									.60						T.	.15										T.		.20				0.95
Rockville	Potomac																															
Salisbury	Coast									.34						.10	.08	.02							T.		.06	.04	.18	.01			0.83
Solomons	do									.53						.02	.09							T.			T.	.05	.40				1.09
State Sanatorium	Potomac									1.20					.12	.10	1.00											.35	.15				2.92
Sudlersville	Coast				T.				.05	.61				.02	T.	.20	.98										T.	.06	.10	.08			2.10
Takoma Park	do									.50	.45			.10	T.		.53	.68										.05	.15	.12			2.58
Towson	do																															
Van Bibber	do								.02	.49						.28	.70											.10	.36	.04	.04		1.99
Westernport	Potomac								1.40	.02	T.					.44	.70		.02									.07		.10			2.79
Westminster	Coast																															
Woodstock	do									.62					.05	.23	.77	.04										.03	.28	.08			2.10
Delaware.																																
Delaware City	Coast									.15	T.				T.	1.34												T.	.13	.10			1.72
Dover	do								.01	.44					T.	.04	1.15											T.	.19				1.83
Milford	do								.02						.02	.09	.77										.03	.02	.22				1.17
Millsboro	do								T.	.70						.10	.30										.01		.29				1.40
Seaford	do									.56						.15	.25										.03	.03	.15				1.17
Wilmington	do									.48					.04		.95											.05	.12	.33			1.97
District of Columbia.																																
Washington	Coast								T.	.76				.03	.05	.15	.87										.02	.07	.25				2.20
Virginia.																																
Culpeper	Rappahannock									1.26							.73												.58				2.57
Dale Enterprise	Shenandoah								.80	3.00	T.	T.	0	T.	T.	.18	.30											.02	.30				4.60
Eastville	Coast								T.	.53							T.	.69							T.		T.	T.	.25	.01			1.48
Fredericksburg	Rappahannock									.68					.02	.01	.35	.11									T.	T.	.60	.01			1.78
Lincoln	Potomac									1.20				.12		.83	.17												.23				2.55
Mount Weather	do								.51	.88	T.				.13	.36	.30										.02	.01	.04				2.25
Quantico	do															.07	.53										T.		.58				1.18
Staunton	Shenandoah									2.90						.07	.21										.06		.47	.03			3.74
Swetnam	Potomac									1.12			.06			.12	.89												.37				2.56
Wachapreague	Coast								T.	.45								.28											.30	T.			1.03
Warsaw	Rappahannoak									.60					T.			.55									T.	T.	1.55				2.70
Waynesboro	Shenandoah																															
Winchester	Potomac									2.25						.35	.70											T.	T.	.25			3.55
Woodstock	Shenandoah								.42	2.06		T.	.03	.02		.20	.33											.09	.26		.03		3.44

* Precipitation included in that of the next measurement.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
‡ Separate dates of falls not recorded.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for November, 1913. District No. 1, North Atlantic States.*

Date.	Maine.												Concord, N. H		Massachusetts.								Providence, R. I.		Connecticut.			
	Eastport.		Greenville.		Orono.		Portland.		Presque Isle.		Rumford Falls.				Amherst.		Boston.		Middleboro.		Nantucket.				Cream Hill.		Hartford.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	42	23	40	18	44	17	49	24	36	28	46	26	45	24	47	23	50	30	57	18	49	32	48	29	42	21	50	27
2....	33	25	35	19	46	27	45	33	37	17	40	25	45	28	51	34	54	42	57	30	50	39	52	40	46	35	53	41
3....	47	25	38	17	46	19	49	29	34	11	44	24	51	27	54	32	55	41	54	31	51	39	54	39	49	36	57	36
4....	53	32	44	28	50	37	52	37	45	28	46	34	51	35	53	40	56	42	59	36	57	43	56	42	52	39	54	42
5....	35	27	32	21	48	27	46	31	34	21	40	30	46	26	49	30	50	35	48	31	47	38	49	35	46	34	50	34
6....	60	30	59	25	59	26	59	30	55	20	54	31	68	22	65	25	68	39	63	23	58	38	62	38	61	30	64	35
7....	60	40	65	26	61	26	61	36	55	28	50	26	64	26	67	27	70	44	67	28	61	46	61	43	63	35	65	39
8....	54	47	47	29	60	30	52	40	55	34	44	28	53	27	58	35	58	46	68	.....	64	50	65	44	55	45	61	42
9....	56	50	54	47	62	50	56	52	55	41	59	44	56	52	65	49	60	54	64	50	61	55	64	53	60	40	66	50
10....	61	50	56	39	62	42	56	39	60	48	58	44	51	32	49	31	55	37	62	44	56	43	53	37	44	30	50	32
11....	50	33	40	26	58	32	41	30	50	32	38	30	36	26	39	25	44	32	44	23	44	36	42	32	37	22	40	28
12....	38	33	32	27	53	39	45	31	40	28	38	30	43	30	47	32	49	34	47	27	44	35	48	34	40	30	44	33
13....	51	34	35	24	44	26	48	36	40	25	43	30	47	32	52	36	59	40	57	25	55	39	57	38	48	40	52	39
14....	52	34	44	31	49	35	53	38	42	30	43	36	47	34	47	32	54	37	54	40	57	40	54	38	48	38	52	38
15....	37	29	32	24	47	29	40	32	36	26	36	29	38	29	43	25	43	33	48	28	42	35	42	32	40	24	42	31
16....	39	26	39	16	39	18	38	30	30	13	40	22	34	29	33	30	39	34	37	27	46	38	38	33	30	27	36	31
17....	46	35	38	17	43	23	49	34	41	14	45	28	46	28	48	29	52	36	48	34	48	39	48	34	40	26	47	32
18....	51	40	43	27	52	32	48	39	45	36	50	35	63	33	59	31	64	39	63	32	57	41	62	38	60	30	62	34
19....	51	42	44	37	51	31	48	40	42	30	46	41	50	43	55	45	58	50	58	38	56	48	60	51	65	40	60	48
20....	67	44	59	38	66	43	70	47	55	35	64	42	70	46	68	49	71	54	71	48	62	52	70	55	66	48	70	53
21....	45	40	43	34	65	33	47	40	50	30	48	39	53	39	60	35	54	45	56	33	54	42	57	43	65	45	62	44
22....	53	43	50	36	59	36	63	45	53	32	53	40	66	41	64	47	68	45	65	39	62	43	66	48	67	47	62	49
23....	64	42	60	30	62	45	68	45	63	45	66	40	66	41	65	43	71	49	68	51	60	49	69	47	56	41	69	45
24....	42	34	40	29	65	28	45	35	50	27	42	35	44	34	43	31	49	37	56	29	50	39	48	38	41	30	45	37
25....	37	30	33	24	45	29	38	30	36	27	34	27	37	29	43	33	43	37	44	36	44	37	44	37	42	28	42	36
26....	39	27	36	23	41	27	45	29	30	20	40	28	44	27	50	28	51	33	53	28	50	39	52	32	37	29	50	32
27....	28	22	27	15	43	20	30	24	28	19	30	15	34	19	36	23	36	27	43	23	39	36	37	26	35	18	36	26
28....	34	18	28	4	36	9	31	20	25	−2	28	10	33	20	33	23	42	32	40	29	44	37	42	30	33	26	39	27
29....	41	34	33	23	40	28	38	29	35	25	36	25	37	29	38	31	44	39	43	38	47	43	42	38	36	32	39	32
30....	37	33	32	25	40	30	40	31	38	26	37	26	40	27	40	33	44	35	46	40	45	42	44	36	35	27	42	36
Mns..	46.8	34.1	41.9	26.0	51.2	29.8	48.3	34.5	43.2	26.5	44.6	30.5	48.6	31.2	50.7	32.9	53.7	39.3	54.7	33.1[a]	52.0	41.1	52.9	38.7	48.0	33.1	52.0	37.0

Date.	New Haven, Conn.		New York.												Pennsylvania.												Atlantic City, N. J.	
			Addison.		Albany.		Binghamton.		Indian Lake.		Little Falls.		New York.		Everett.		Harrisburg.		Philadelphia.		Scranton.		State College.		Wellsboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	50	30	48	30	50	30	47	27	38	.....	45	40	49	32	44	36	49	32	51	37	49	30	43	29	.....	.....	49	30
2....	55	37	51	31	51	39	52	35	44	.....	48	37	55	36	60	30	52	38	56	37	51	35	51	33	.....	.....	56	34
3....	57	38	59	29	55	34	56	34	48	.....	53	33	58	42	64	22	58	33	59	43	59	35	57	28	.....	.....	56	39
4....	56	40	53	36	51	39	50	37	47	.....	50	35	56	45	54	40	54	43	60	47	50	40	57	37	.....	.....	63	41
5....	52	35	60	26	50	33	51	32	44	.....	44	30	55	38	60	30	56	38	54	40	51	36	54	32	.....	.....	55	36
6....	62	34	59	21	58	32	65	27	65	.....	60	29	63	40	65	21	61	32	62	40	65	31	61	28	.....	.....	61	36
7....	64	38	65	28	62	32	68	33	62	.....	57	37	64	46	64	26	62	35	63	39	68	32	62	33	.....	.....	59	35
8....	61	43	61	41	60	38	59	47	55	.....	62	36	62	50	53	33	54	45	65	48	62	44	55	45	.....	.....	63	51
9....	63	48	54	42	67	42	62	36	59	.....	61	49	63	43	47	26	60	34	63	41	63	35	53	29	.....	.....	62	42
10....	49	32	52	26	44	32	36	28	56	26	50	28	45	32	32	26	36	31	44	35	35	27	29	25	.....	.....	46	33
11....	41	29	35	25	40	29	32	28	38	26	32	28	40	28	30	24	37	30	40	30	35	28	29	23	.....	.....	41	30
12....	48	31	47	30	43	35	43	32	37	.....	40	27	48	32	51	23	46	33	47	34	44	31	45	26	.....	.....	46	30
13....	55	42	52	38	51	42	53	42	41	17	55	35	56	41	75	33	54	40	58	40	55	41	54	40	.....	.....	55	45
14....	53	38	52	32	50	35	52	34	48	29	49	35	56	38	58	32	58	41	62	42	55	36	53	39	.....	.....	64	42
15....	43	33	41	24	41	30	39	31	35	19	36	23	43	35	55	26	41	35	44	39	41	34	40	26	.....	.....	43	37
16....	40	33	39	30	36	32	35	33	33	24	32	29	43	36	50	34	40	35	43	37	37	34	36	32	.....	.....	52	38
17....	48	35	54	30	47	31	47	31	45	18	42	25	47	35	50	32	51	40	50	39	47	34	53	32	.....	.....	49	39
18....	60	36	56	33	52	32	55	32	49	23	46	33	59	38	64	31	62	38	62	40	58	38	60	37	.....	.....	63	39
19....	60	51	69	46	59	46	65	50	46	38	57	43	63	50	75	46	72	52	71	51	69	52	70	51	.....	.....	61	52
20....	72	52	70	58	68	50	67	53	57	46	60	49	70	54	69	52	71	59	74	56	69	57	65	56	.....	.....	77	56
21....	59	46	76	53	56	39	70	49	55	27	50	37	62	52	73	40	71	52	71	54	71	57	69	52	.....	.....	60	52
22....	63	47	74	53	62	52	70	56	60	40	68	43	61	51	77	40	67	50	65	50	72	51	69	52	.....	.....	61	52
23....	69	46	64	44	59	44	65	40	61	38	63	39	69	47	64	40	68	47	72	50	62	43	64	42	.....	.....	72	51
24....	46	38	47	33	45	37	45	34	41	30	41	35	48	38	50	33	49	38	52	43	44	33	45	32	.....	.....	51	39
25....	46	37	50	31	43	35	43	33	36	24	38	33	49	36	49	34	50	40	50	38	44	33	49	33	.....	.....	48	36
26....	52	33	47	34	48	31	43	30	41	28	41	27	53	39	49	31	50	43	54	44	47	36	45	38	.....	.....	52	42
27....	39	27	41	31	34	26	34	26	31	8	37	22	39	32	41	34	47	31	49	35	36	30	41	30	.....	.....	47	43
28....	42	32	39	31	36	26	39	32	.....	.....	31	29	48	36	39	33	41	32	49	40	40	32	39	30	.....	.....	53	47
29....	41	35	44	37	39	32	42	37	35	9	36	30	47	38	45	32	48	41	51	43	45	37	44	33	.....	.....	54	44
30....	44	35	43	38	40	32	48	37	40	25	48	31	44	39	48	38	44	39	43	41	48	37	43	37	.....	.....	47	43
Mns..	53.0	37.7	53.4	34.7	49.9	35.6	51.1	35.9	47.5[a]	26.1[b]	47.7	33.5	53.8	40.0	55.2	32.6	53.6	39.2	56.1	41.8	52.4	37.3	51.2	35.3	.....	.....	55.5	41.1

TABLE 3.—*Maximum and minimum temperatures for November, 1913. District No. 1*—Continued.

Date.	New Jersey.								Martinsburg, W. Va.§§		Maryland.								Millsboro, Del.		Washington, D. C.		Virginia.					
	Bridgeton.		Phillipsburg.		Sussex.		Trenton.				Baltimore.		Darlington.		Frederick.		Western Port.						Fredericksburg.		Staunton.§§		Woodstock.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	51	28	50	29	52	24	48	31	50	27	50	34	49	26	51	27	56	25	52	28	52	32	53	27	54	25	53	25
2....	58	30	57	34	54	35	54	35	53	32	57	38	54	26	55	31	65	33	64	32	55	33	56	23	58	23	60	24
3....	62	29	59	33	58	30	58	36	59	27	62	35	58	27	61	26	69	26	67	29	62	30	65	26	66	28	58	26
4....	65	42	58	44	55	43	58	40	58	32	62	46	59	27	60	39	67	45	68	44	63	45	70	44	67	46	65	38
5....	55	31	56	35	54	35	53	38	57	36	58	40	54	34	58	33	67	31	62	34	58	34	57	32	59	29	62	30
6....	65	29	64	29	66	26	64	35	60	27	61	36	61	27	62	25	72	25	69	29	60	30	65	26	65	26	69	26
7....	66	28	65	27	66	28	64	32	61	27	60	36	62	26	64	26	65	30	72	30	65	30	67	27	67	35	67	30
8....	69	45	59	38	61	33	66	45	62	31	58	50	59	38	60	36	50	33	73	46	59	48	61	37	55	36	57	34
9....	62	47	64	51	64	54	64	39	52	45	59	38	55	40	57	38	57	30	62	39	57	36	57	41	38	34	50	34
10....	47	34	51	33	54	32	43	31	35	32	42	33	40	31	40	33	36	22	47	35	42	32	47	36	34	29	38	32
11....	42	29	37	27	40	25	37	29	37	25	40	29	39	22	38	27	35	25	45	30	38	28	40	24	34	21	37	34
12....	49	29	46	31	48	29	46	32	48	27	48	33	47	29	48	28	58	24	57	28	48	30	50	21	55	21	53	21
13....	61	32	52	36	53	36	56	38	68	28	61	41	59	35	68	34	61	35	68	48	64	42	69	37	69	46	71	31
14....	60	46	53	45	51	42	59	38	68	40	63	46	61	46	61	47	58	45	69	47	62	48	71	48	66	52	65	47
15....	51	32	45	32	44	29	42	34	39	34	46	37	51	35	54	32	48	34	55	37	48	37	64	40	48	40	54	37
16....	48	36	40	34	38	32	40	34	42	36	44	39	47	32	41	35	44	35	56	40	44	39	47	39	56	40	45	37
17....	51	38	48	34	44	32	47	37	53	38	52	42	48	32	53	36	63	36	55	37	52	36	54	39	56	33	59	38
18....	63	33	61	34	61	29	61	35	65	30	66	40	63	30	66	33	65	36	66	33	65	32	68	30	67	37	70	31
19....	69	43	67	49	62	45	70	48	74	31	68	52	69	46	75	45	82	51	77	46	72	45	77	43	75	52	76	44
20....	77	51	71	54	71	53	70	54	71	49	76	58	74	52	74	54	67	51	79	55	76	52	81	49	75	55	77	50
21....	75	48	67	47	67	45	68	50	71	41	70	50	70	46	73	46	80	42	74	48	74	50	77	48	75	45	77	44
22....	72	46	64	46	64	45	62	48	72	45	63	49	65	42	73	44	87	43	79	46	74	46	76	41	76	43	78	43
23....	74	44	69	44	66	47	69	46	70	48	73	49	72	46	70	47	69	45	76	44	74	48	79	48	74	46	72	44
24....	64	35	55	40	52	32	48	38	51	41	52	43	58	32	56	38	58	37	60	38	52	39	72	35	53	38	58	32
25....	51	32	48	34	44	34	47	35	50	39	52	39	49	32	50	33	52	31	55	33	50	36	52	32	54	26	52	31
26....	52	35	50	38	59	32	51	40	56	39	55	43	51	35	56	39	53	36	53	35	49	42	56	35	63	42	63	37
27....	46	36	47	31	45	25	45	34	44	41	49	35	48	32	50	36	46	39	49	45	48	37	51	44	48	43	55	40
28....	50	36	40	33	33	30	48	38	41	34	50	38	50	32	41	33	44	36	54	46	47	37	45	38	46	38	41	36
29....	52	46	46	36	42	33	47	40	47	35	53	45	51	32	49	40	50	40	58	46	52	41	47	42	52	41	50	39
30....	47	40	45	38	42	31	42	37	45	40	49	40	48	29	48	40	48	40	52	42	50	41	49	43	42	39	46	42
Mns..	58.5	37.0	54.5	37.2	53.7	34.9	54.2	38.2	55.3	35.2	56.7	41.3	55.7	34.0	57.1	36.0	58.9	35.4	62.4	39.0	57.1	38.5	60.8	36.5	58.2	37.0	59.3	34.9

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 2, SOUTH ATLANTIC AND EAST GULF STATES.

CHARLES F. VON HERRMANN, District Editor.

GENERAL SUMMARY.

During the first six days of November scattered rains in Florida, which were occasionally heavy at Miami and Key West, with moderately low pressure, gave some indication of storm formation south of Florida, which became distinct on the morning of the 8th, when the atmospheric pressure fell to 29.9 inches at Key West. By the evening of the 8th the storm seems to have been central near Charleston, S. C., where the pressure was 29.52 inches. From that point it moved northward rapidly, developing great force. The lowest pressure in the district was 29.12 inches, at Richmond, Va., on the morning of November 9, and by evening of the same day it had fallen to 28.76 inches, at Buffalo N. Y. Although very destructive in the lake region only moderately high winds and general rains accompanied the disturbance in the South Atlantic States. However, the persistent high winds, rapid fall in temperature, gloomy skies, and snow flurries on Sunday, November 9, made that the most disagreeable day for the month in the northern portions of the district. During the clear cold days that followed, the lowest temperatures for the month occurred, ranging below 20° in nearly all portions of the district on the 10th to 12th.

A rapid change to warmer weather occurred on the 13th, and during the remainder of the month the temperature was continuously above normal, and the long period of fine clear weather that prevailed until nearly the end of the month was hardly interrupted by the very light showers on the 16th to 17th and 22d to 23d. As a whole, therefore, the month was relatively warm and dry, with an unusually large amount of sunshine, and was favorable for outdoor work and agricultural interests, except that the deficiency in rainfall was detrimental in Florida. Some forest fires occurred in northern Mississippi.

TEMPERATURE.

In spite of the general deficiency in temperature during the first 12 days of the month, especially on the 1st and from the 9th to 12th, the month as a whole was quite warm, owing to the long period from the 13th to the 30th, with temperatures above normal. In Virginia, Alabama, and the Mississippi area the excess in temperature was quite marked, being above 2° on the average for each of these States, while in the remainder of the district the averages were more nearly normal. The greatest excess at individual cooperative stations ranged from 4° to 6° in the Mississippi area, but it was also very warm at many stations in western Virginia. Moderate deficiencies, generally less than 2°, occurred over extreme southern Florida, in central Georgia, and in the eastern portion of the Carolinas.

The only pronounced cold weather during the month occurred from the 9th to the 12th, when the minimum temperatures fell below 20° in all portions of the district, except Florida, where the lowest was 25°, reaching 14° at Ramhurst, in northern Georgia, and at Rock House, in western North Carolina. Heavy to killing frosts extended to the coast line, as far south as Jacksonville, Fla. The period of greatest warmth lasted from about the 19th to the 23d, the temperature rising above 80° in all sections, with a maximum of 89° on the 22d at Society Hill, S. C.; Valdosta, Ga.; and Orange City, Fla. In most States in the district the range in monthly mean temperatures was small. The highest monthly mean was 73.4°, at Key West, and the lowest 45.6°, at Lexington, Va.

PRECIPITATION.

The precipitation was below normal in all States in the district, with the greatest deficiencies in Florida, Georgia, and Alabama. The average for the district was 1.71 inches, indicating a deficiency of 0.97 inch. The largest amounts fell in the southern portion of the Mississippi area, where they ranged from 4 to 6 inches, and in extreme southern Florida, where one station—Homestead—received 9.28 inches, the maximum for the district. The least precipitation fell in northern and southwestern Georgia and in west central Florida. No rain fell at Fort Gaines, Ga., and only a trace at Rockwell, Fla.

The rainfall as a rule occurred in distinct and very brief periods about the 8th to 9th, 16th to 17th, and 29th to 30th. In the Atlantic States the heaviest rains fell on the 8th and 9th, in the Gulf States on the 29th and 30th. Heavy 24-hourly amounts, however, occurred at comparatively few stations. The maximum was 5.80 inches at Homestead, Fla., on the 2d, and next to that 4.03 at Blairs, S. C., on the 8th. Between the rainy periods the weather as a rule was clear and sunny.

During the change in temperature on the 9th snow flurries fell at 3 stations in northern Alabama, at 14 in Georgia, at 11 in South Carolina, at 10 in North Carolina, and at 8 in Virginia. The only measureable amounts were Hot Springs, Va., 2.4 inches, Rock House, N. C., 0.4 inch, and Valley Head, Ala., 1 inch.

MISCELLANEOUS PHENOMENA.

Westerly winds prevailed in the States from Georgia to Virginia, northeast winds in Florida, and southeast winds in Alabama and Mississippi. The average hourly velocity exceeded 10 miles at Norfolk, Va., Hatteras, N. C., Atlanta, Ga., and Key West, Miami, Pensacola, and Sand Key, Fla. Gales above 40 miles an hour occurred only on the 9th, with a maximum of 48 miles from the west at Hatteras.

The number of clear days was unusually large, averaging 19 for the district; the average number of cloudy days was 5, and rainy days but 3. The average number of hours of sunshine was 223, or 72 per cent of the possible amount. Over 80 per cent of the possible amount of sunshine was received at several stations; the minimum was 50 per cent at Miami, Fla.

RAIN FROM A CLOUDLESS SKY.

Mr. W. F. Reed, jr., in charge of the Pensacola station, furnishes the following note:

On November 18 local rain fell from a clear sky about one square north of this station; it covered a small area behind Marston & Quina's furniture store, where light scattered drops fell from 9.30 a. m. to 1 p. m. The store is two stories high, built of brick, and to the eastward, or in the center of the square, the space is open and gives free entry to the light easterly winds that prevailed at the time. The temperature ranged from 63° to 70°. No clouds were visible until 12.45 p. m., when a few cirri appeared in the west.

RIVER CONDITIONS.

River stages were generally above normal in North Carolina, but only one rise of any importance occurred, resulting from the heavy rains of the 8th and 9th, for which warnings were issued on the 10th. The largest tributary of the Roanoke, the Staunton, attained a stage of 21.4 feet at Randolph, Va. (flood stage, 21 feet), and the Roanoke at Weldon, N. C., rose from 10 feet on the 9th to 34.9 feet on the 11th (flood stage, 30 feet).

In South Carolina moderate floods occurred during November in the Wateree and Santee Rivers, and in the Pedee River at Cheraw. From 2 to 4 inches of rain having fallen over a large part of the Saluda, Broad Congaree, and Wateree drainage areas on the 8th, warnings for the Wateree and Santee Rivers were issued on the 9th. A crest stage of 25.7 feet occurred at 4 p. m., on the 10th at Camden (flood stage, 24 feet), 13 feet at Rimini on the 12th (flood stage, 12 feet), and 12.8 feet at Ferguson on the 15th (flood stage, 12 feet). The unavoidable losses were estimated at $900 and movable property valued at $10,000 was saved by the warnings.

The tributaries to the Pedee averaged about normal, although the main stream as well as the Waccamaw averaged considerably above ordinary November stages. The high average stage of the Pedee was due to the moderate flood that crested at Cheraw on the 10th, with a stage of 28.6 feet, or 1.6 feet above the flood stage, following a rise of more than 25 feet in 24 hours. Warnings were issued on the 9th, but the flood was of such moderate proportions and receded so quickly that no material damage resulted. In South Carolina the month closed with the rivers again uniformly low.

The rivers in Georgia, Alabama, and Mississippi were low throughout the month and experienced only unimportant fluctuations.

TABLE 1.—*Climatological data for November, 1913. District No. 2, South Atlantic and East Gulf States.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Virginia.																				
Arvonia	Buckingham	350	9	49.1	+ 2.7	80	19†	20	12	40	2.34	+ 0.20	1.27	0	8	16	11	3	w.	Rev. Plummer F. Jones.
Ashland	Hanover	221	22	49.7	+ 2.6	78	20	23	12	39	1.55	− 0.87	0.56	0	5	13	11	6	s.	E. L. C. Scott.
Buchanan	Botetourt	820	9	.....	.....	.....	.....	.....	.....	.....	4.65	+ 2.98	1.17	0	11	.....	.....	.....	.....	D. D. Booze.
Callaville	Brunswick	250	19	49.4	+ 0.2	80	20	19	12	42	1.12	0.90	0.76	0	4	22	3	5	n.	F. M. Gage.
Cape Henry	Princess Anne	20	39	52.2	+ 0.1	76	23	31	11	33	1.01	− 1.73	0.50	0	4	18	6	6	sw.	U. S. Weather Bureau.
Catawba	Roanoke	1,760	2	50.3	.....	78	21	22	11	35	3.00	.....	1.94	1.0	6	21	3	6	w.	State Board of Health Sanitarium.
Charlottesville	Albemarle	800	24	50.1	+ 2.4	79	20†	24	11	34	3.42	+ 1.00	2.17	0	6	12	7	11	w.	Leander McCormick Observatory.
Clarksville	Mecklenburg	286	19	.....	.....	.....	.....	.....	.....	.....	1.82	− 0.59	1.41	0	2	.....	.....	.....	.....	J. A. Ligon.
Columbia	Fluvanna	246	15	47.4	+ 1.4	78	20	19	11	41	2.29	+ 0.29	1.10	0	4	19	1	10	sw.	Chesapeake & Ohio Ry. Co.
Danville	Pittsylvania	413	13	.....	.....	.....	.....	.....	.....	.....	4.01	+ 2.41	3.45	T.	2	.....	.....	.....	.....	C. G. Watkins.
Diamond Springs	Princess Anne	25	3	52.8	.....	79	21	27	12	39	1.51	.....	0.80	0	5	21	2	7	.....	Virginia Truck Experiment Station.
Dry Bridge	Chesterfield	325	2	.....	.....	.....	.....	.....	.....	.....	1.72	.....	0.82	0	5	.....	.....	.....	.....	Dr. E. W. Magruder.
Hot Springs	Bath	2,195	21	47.1	+ 5.9	68	22†	17	12	30	2.55	+ 0.50	1.45	2.4	3	16	8	6	.....	A. M. Tait.
Ivor	Southampton	87	4	49.6	.....	79	20	21	12	42	2.06	.....	1.32	0	3	.....	.....	.....	.....	Norfolk and Western Railway Experiment Farm.
Lassiter	Goochland	100	3	.....	.....	.....	.....	.....	.....	.....	1.55	.....	0.90	0	3	20	3	7	.....	T. J. Davis.
Lexington	Rockbridge	1,060	36	45.6	+ 2.1	75	19†	17	12	43	3.78	+ 1.15	1.74	T.	7	19	2	9	.....	Virginia Military Institute.
Lynchburg	Campbell	685	42	49.8	+ 3.8	80	20	23	12	39	3.32	+ 0.53	2.87	T.	7	18	4	8	w.	U. S. Weather Bureau.
Newport News	Warwick	55	10	51.1	.....	77	23	27	12	33	1.32	.....	0.50	0	6	18	5	7	nw.	C. W. Ashby.
Norfolk	Norfolk	91	43	52.5	+ 1.3	76	21	30	12	33	1.30	− 1.42	0.60	0	6	19	3	8	sw.	U. S. Weather Bureau.
Petersburg	Dinwiddie	60	26	51.0	+ 2.3	76	23	30	2†	40	2.00	− 0.49	0.72	0	4	.....	.....	.....	.....	Walter Edward Harris.
Randolph	Charlotte	334	9	.....	.....	.....	.....	.....	.....	.....	1.41	.....	0.93	0	2	.....	.....	.....	.....	W. J. Abbitt.
Richmond	Henrico	144	34	50.2	+ 1.4	80	20	25	11	36	1.49	− 0.90	0.60	0	5	18	4	8	s.	U. S. Weather Bureau.
Roanoke	Roanoke	907	3	47.4	.....	77	19	21	12	40	2.09	.....	1.74	T.	7	19	4	7	w.	Capt. Reese F. Bell.
Rocky Mount	Franklin	1,150	19	52.6	+ 4.1	78	19	29	11	30	1.87	− 0.69	1.66	T.	4	.....	.....	.....	.....	G. W. B. Hale.
Ruckersville	Greene	625	2	47.5	.....	79	19†	19	12	40	2.67	.....	1.92	0	6	.....	.....	.....	.....	Dr. Jesse Ewell.
Runnymede (near)	Surry	15	25	50.4	+ 2.0	78	14	21	12	34	1.49	− 1.26	0.80	0	4	21	1	8	nw.	B. W. Jones.
Stuart	Patrick	1,188	1	46.8	.....	76	20†	17	1†	45	2.19	.....	0.95	T.	5	17	6	7	n.	Miss Etta Rickman.
West Point	King William	15	1	51.8	.....	79	20†	26	11	43	1.96	.....	0.56	0	6	20	4	6	s.	C. L. Maskey.
Williamsburg	James City	70	22	50.4	+ 2.3	76	23	25	12	35	0.70	− 1.58	0.35	0	3	21	4	5	sw.	Eastern State Hospital.
North Carolina.																				
Albemarle	Stanly	700	1	49.4	.....	80	23	19	11	47	3.24	.....	3.12	0	5	24	2	4	sw.	M. J. Harris.
Altapass (near)	McDowell	2,133	.....	.....	.....	.....	.....	.....	.....	.....	1.25	.....	0.60	T.	3	.....	.....	.....	.....	R. F. Brewer.
Beaufort	Carteret	10	12	54.1	− 2.5	70	4†	30	2	33	0.82	− 1.74	0.65	0	3	23	4	3	n.	Lewis Radcliffe.
Belhaven	Beaufort	4	4	54.1	.....	78	22	27	12	36	1.05	.....	0.80	0	2	24	6	0	s.	A. L. Bell.
Brewers	Wilkes	1,950	16	49.8	+ 2.4	82	20	19	2	52	1.68	− 1.11	0.67	0	4	11	12	7	w.	W. L. Brewer.
Caroleen	Rutherford	806	13	48.3	− 1.7	77	14	19	11	47	1.52	− 1.06	0.70	0	3	19	8	3	w.	S. B. Tanner.
Chalybeate Springs	Harnett	500	7	49.9[a]	.....	79	23	18	12	46	1.51	.....	1.28	0	2	22	1	7	w.	J. A. Smith.
Chapel Hill	Orange	500	55	51.1	+ 1.2	77	20†	23	11	43	2.38	− 0.40	1.89	0	4	23	2	5	nw.	Prof. A. H. Patterson.
Charlotte	Mecklenburg	773	37	51.8	+ 1.4	77	23	24	11	34	3.22	+ 0.36	2.80	T.	4	15	9	6	sw.	U. S. Weather Bureau.
Chimney Rock	Rutherford	1,150	3	51.9	.....	79	21	26	10	42	2.14	.....	0.80	T.	3	20	7	3	w.	J. M. Flack.
Durham (near)	Durham	406	4	.....	.....	.....	.....	.....	.....	.....	2.08	.....	1.69	0	2	.....	.....	.....	.....	J. C. Michie.
Eagletown	Northampton	66	8	50.0	.....	76	23	23	12	35	1.60	.....	0.80	0	3	20	6	4	sw.	J. T. Elliott.
Edenton	Chowan	30	19	51.0	− 0.6	75	5†	24	12	39	2.40	− 0.45	1.75	0	2	20	3	7	s.	E. R. Conger.
Elizabeth City	Pasquotank	8	1	52.8	.....	75	23	24	12	35	1.35	.....	0.95	0	2	23	5	2	sw.	W. J. Simmons.
Elizabethtown	Bladen	60	2	.....	.....	.....	.....	.....	.....	.....	1.45	.....	1.45	0	1	.....	.....	.....	.....	H. H. Barnhill.
Elkin	Surry	874	.....	.....	.....	.....	.....	.....	.....	.....	1.42	.....	1.35	0	2	.....	.....	.....	.....	Mrs. Cynthia L. Myers.
Enfield (near)	Halifax	99	2	.....	.....	.....	.....	.....	.....	.....	1.15	.....	0.63	0	2	.....	.....	.....	.....	T. S. Inborden.
Fayetteville	Cumberland	170	26	52.5	+ 0.7	80	23	25	11	39	1.12	− 1.69	1.00	0	4	21	4	5	s.	Frank Glover.
Globe (near)	Caldwell	1,800	1	.....	.....	.....	.....	.....	.....	.....	1.25	.....	0.67	0	3	.....	.....	.....	.....	Julius L. Gragg.
Goldsboro	Wayne	102	43	48.1	− 3.1	75	23	23	12	44	1.18	− 1.12	0.78	0	4	23	4	3	.....	Mrs. J. J. Robinson.
Gorge (near)	Caldwell	1,358	1	.....	.....	.....	.....	.....	.....	.....	3.89	.....	2.67	T.	3	.....	.....	.....	.....	A. J. Bagley.
Graham	Alamance	656	11	.....	.....	.....	.....	.....	.....	.....	3.21	+ 1.00	2.69	0	2	.....	.....	.....	.....	Dr. W. R. Goley.
Greensboro	Guilford	843	32	50.2	+ 1.6	78	21	21	11	40	3.03	+ 0.36	3.03	0	1	.....	.....	.....	sw.	A. R. Horry.
Greenville	Pitt	75	20	50.6	− 1.2	75	23	26	11	31	1.45	− 1.22	0.99	T.	4	18	2	10	sw.	R. M. Hearne.
Hatteras	Dare	11	39	54.4	− 2.3	69	23	37	12	24	0.53	− 4.14	0.28	0	3	20	7	3	n.	U. S. Weather Bureau.
Henderson	Vance	508	20	49.8[a]	+ 0.3	76	20	24	11†	34	1.59	− 1.16	0.81	0	5	21	5	4	nw.	Enoch Powell.
Hickory	Catawba	1,165	.....	50.0	.....	77[c]	14†	20	11	40[c]	1.77	.....	1.19	0	5	21	5	4	nw.	Frank B. Gwin.
Kings Mountain	Cleveland	952	1	51.8	.....	79	23	21	11	35	2.18	.....	1.10	T.	4	24	3	3	sw.	G. T. King.
Kinston	Lenoir	46	15	51.4	+ 0.3	80	23	23	12	41	1.01	− 1.32	0.73	0	2	26	0	4	w.	H. C. V. Peebles.
Lincolnton	Lincoln	994	7	48.1	.....	81	23	18	11	50	2.06	.....	1.72	0	3	17	8	5	nw.	S. P. Houser.
Louisburg	Franklin	375	22	48.5	+ 0.1	75	23	22	12	37	1.19	− 1.29	0.70	0	3	21	4	5	sw.	T. B. Wilder.
Lumberton	Robeson	102	30	52.3	+ 0.3	80	23	25	11†	45	1.06	− 1.16	0.87	T.	3	.....	.....	.....	sw.	B. M. Davis.
Manteo	Dare	12	8	52.9	.....	76	23	31	13†	34	1.20	.....	0.60	0	2	21	7	2	ne.	U. S. Weather Bureau.
Marion	McDowell	1,425	21	50.4	+ 1.5	77	23	16	11	46	1.27	− 1.80	1.01	T.	4	20	8	2	w.	Sergt. Thomas McGuire.
Moncure	Chatham	145	19	48.7	− 1.5	79	23	19	11†	47	1.46	− 1.13	1.21	0	2	22	1	7	nw.	B. J. Utley.
Monroe	Union	586	19	50.4	+ 0.3	78	23	20	12	43	2.69	− 0.21	2.69	0	2	22	2	6	sw.	T. A. Ashcraft.
Morganton	Burke	1,135	26	48.8	+ 0.7	76	13†	20	12	51	1.31	− 1.40	0.90	T.	4	22	3	5	se.	J. B. P. Massey.
Mount Holly	Gaston	616	16	.....	.....	.....	.....	.....	.....	.....	2.84	+ 0.19	2.60	0	2	.....	.....	.....	.....	J. W. Holland.
Nashville	Nash	190	9	50.4	.....	78	23	22[d]	12	38[d]	1.04	.....	0.70	0	2	18	2	10	w.	J. B. Boddie.
Neuse	Wake	266	1	.....	.....	.....	.....	.....	.....	.....	1.28	.....	0.86	0	2	.....	.....	.....	.....	E. M. Allen.
Newbern	Craven	12	31	54.8	+ 0.7	85	23	26	12	45	1.21	− 1.72	0.83	0	3	18	6	6	sw.	J. B. Hill.
North Wilkesboro (near).	Wilkes	1,700	1	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.80	0	4	.....	.....	.....	.....	John Johnson.
Parkersburg	Sampson	121	1	52.2[a]	.....	80	23	24	11	47	0.90	.....	0.90	0	1	.....	.....	.....	.....	E. J. Conway.
Pinehurst	Moore	650	9	52.2[a]	.....	78	14	23	12	43	1.10	.....	1.10	0	1	.....	.....	.....	.....	General Office.
Raleigh	Wake	390	42	51.9	+ 1.7	76	23	25	12	36	1.39	− 0.96	1.04	0	5	18	6	6	ne.	U. S. Weather Bureau.
Ramseur	Randolph	442	6	49.6	.....	79	20†	20	11†	47	2.68	.....	2.46	T.	4	22	3	5	n.	A. H. York.
Randleman	...do	810	8	.....	.....	.....	.....	.....	.....	.....	3.75	.....	3.35	0	2	.....	.....	.....	.....	L. D. Mendenhall.
Reidsville	Rockingham	828	14	49.8	+ 2.1	76	20	22	11	34	3.50	+ 0.93	3.15	0	2	18	3	9	sw.	E. M. Redd.
Rock House	Macon	3,100	21	48.4	+ 2.0	69	13†	14	11	33	2.12	− 2.34	1.25	0.4	6	20	6	4	nw.	Barry C. Hawkins.
Rocky Mount	Nash	105	2	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.60	0	2	.....	.....	.....	.....	G. P. Womble.
Rougemont	Durham	549	.....	50.0	.....	77[b]	21	18[m]	12	44	2.50	.....	2.00	0	2	.....	.....	.....	.....	H. L. Carver.
Salisbury	Rowan	760	29	51.0	+ 0.5	77	15†	21	11	50	2.36	− 0.27	1.96	0	2	28	0	2	n.	Miss Thelma Wilkinson.
Saxon	Stokes	900	21	50.2[a]	+ 3.3	77	20†	21	12	42	2.98	+ 0.33	2.58	0	4	.....	.....	.....	.....	L. A. Duncan.
Scotland Neck	Halifax	80	9	49.6	.....	78	23	22	12	39	1.42	.....	0.94	0	2	19	3	8	sw.	J. Y. Savage.
Settle	Iredell	700	17	49.5	+ 0.8	78	14†	17	11	44	2.51	− 0.21	2.25	0	4	21	3	6	sw.	C. H. Smith.
Sloan	Duplin	50	20	51.0	− 1.9	78	23	23	12	44	0.99	− 1.83	0.82	0	2	23	2	5	n.	D. M. Sholar.
Smithfield	Johnston	151	23	49.6	− 0.9	78	23	23	12	44	1.15	− 1.47	0.94	0	3	20	5	5	n.	Edwin S. Sanders.

TABLE 1.—*Climatological data for November, 1913. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Carolina—Con.																				
Southern Pines	Moore	519	23	52.7	− 0.3	76	4†	25	12	34	0.95	− 1.80	0.95	0	1	21	2	7	.....	Mrs. P. H. Beck.
Southport	Brunswick	18	58	53.6	− 3.1	73	8†	26	12	28	0.46	− 2.32	0.40	0	2	25	3	2	sw.	Mrs. C. E. Taylor.
Statesville	Iredell	950	25	50.6	+ 1.4	79	23	20	11	42	2.14	− 0.78	1.38	0	2	19	6	5	sw.	D. Matt Thompson.
Tarboro	Edgecombe	50	28	51.2	+ 0.1	81	21	24	12	49	1.00	− 1.62	0.63	0	4	.....	.....	.....	.....	E. V. Zoeller.
Weldon	Halifax	81	41	48.6	+ 0.1	78	14†	23	12	48	1.75	− 0.70	1.07	0	3	18	1	11	w.	H. S. S. Cooper.
Willard	Pender	51	5	51.4	.....	78	23	23	12	44	0.82	.....	0.72	0	2	23	2	5	s.	J. H. Jefferies.
Wilmington	New Hanover	52	42	54.2	+ 0.1	78	22	30	12	32	0.65	− 1.80	0.63	0	4	20	7	3	w.	U. S. Weather Bureau.
Winston-Salem	Forsyth	1,000	18	.....	.....	75	23	.....	.....	.....	3.70	+ 1.25	2.90	0	2	21	0	9	w.	Rev. H. E. Rondthaler.
South Carolina.																				
Aiken	Aiken	527	18	55.6	+ 1.0	78	22	21	11	34	2.03	− 0.47	1.58	0	4	19	7	4	sw.	W. M. Brown.
Allendale	Barnwell	186	24	55.6	0.0	80	8	22	11	22	0.80	− 1.07	0.80	0	1	.....	.....	.....	.....	S. B. Rouse.
Anderson	Anderson	764	11	54.8	+ 3.3	77	15	25	11	38	1.20	− 1.58	0.76	0	3	21	3	6	w.	H. H. Russell.
Batesburg	Lexington	656	24	52.8	− 1.4	75	15	23	11	40	2.67	+ 0.21	2.67	T.	1	.....	.....	.....	.....	E. J. Hite.
Beaufort	Beaufort	21	26	55.4	− 3.8	79	23	30	11	34	2.25	+ 0.07	2.00	0	2	.....	.....	.....	ne.	Miss Lillian H. Rice.
Blackville	Barnwell	296	23	56.5	+ 0.8	82	22	24	12	45	1.37	− 0.64	1.31	0	2	.....	.....	.....	.....	Mrs. D. B. Sanders.
Blairs	Fairfield	293	7	.....	.....	.....	.....	.....	.....	.....	4.03	.....	4.03	0	1	.....	.....	.....	.....	J. N. Owens.
Bowman	Orangeburg	160	11	53.8	− 0.7	80	22	22	12	43	1.80	+ 0.08	1.60	0	2	20	9	1	w.	B. O. Evans.
Broxton	Hampton	.....	2	.....	.....	.....	.....	.....	.....	.....	1.10	.....	1.10	0	1	.....	.....	.....	.....	Thomas D. Williams.
Calhoun Falls	Abbeville	508	19	.....	.....	.....	.....	.....	.....	.....	1.87	− 0.67	1.61	0	2	.....	.....	.....	.....	L. M. Parker.
Camden	Kershaw	222	46	54.2	.....	80	22	25	12	45	1.59	− 0.58	1.55	0	2	24	3	3	ne.	W. C. Brown.
Catawba	York	562	7	.....	.....	.....	.....	.....	.....	.....	2.96	.....	2.96	0	1	.....	.....	.....	.....	James C. Faris.
Chappells	Newberry	402	7	.....	.....	.....	.....	.....	.....	.....	3.00	.....	3.00	0	1	.....	.....	.....	.....	J. J. Murran.
Charleston	Charleston	48	42	57.0	− 1.1	78	23	32	11	25	1.19	− 1.68	1.19	0	1	16	11	3	n.	U. S. Weather Bureau.
Cheraw	Chesterfield	144	24	51.8	− 0.6	81	23	24	12	45	1.78	− 0.37	1.60	T.	2	.....	.....	.....	.....	J. H. Powe.
Clemson College	Oconee	850	21	50.9	− 0.2	73	23	21	11	35	0.89	− 1.91	0.85	0	2	22	4	4	w.	Prof. F. H. H. Calhoun.
Columbia	Richland	351	26	54.6	+ 0.8	78	22	26	11	37	1.95	− 0.28	1.95	T.	2	16	9	5	w.	U. S. Weather Bureau.
Conway	Horry	25	20	53.4	− 1.0	80	22	27	12	41	0.95	− 1.35	0.95	0	1	23	0	7	n.	Paul Quattlebaum.
Darlington	Darlington	175	17	52.0	.....	80	23	22	12	47	1.22	− 1.20	1.22	T.	1	25	3	2	.....	D. C. McCall.
Dillon	Marion	100	8	52.8	− 0.7	79	22	25	12	40	1.23	− 0.96	1.18	0	2	.....	.....	.....	.....	A. E. Rowell.
Edgefield	Edgefield	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.58	.....	1.49	0	2	.....	.....	.....	.....	T. L. Timmerman.
Edisto	Bamberg	127	25	.....	.....	.....	.....	.....	.....	.....	1.50	− 0.73	1.50	0	1	.....	.....	.....	.....	Nathan Jenkins.
Effingham	Florence	106	20	.....	.....	.....	.....	.....	.....	.....	1.31	− 1.13	1.30	0	2	.....	.....	.....	.....	H. B. McCall.
Ferguson	Berkeley	51	4	54.1	− 1.4	80	23	25	12	38	1.38	− 0.85	1.37	0	2	19	8	3	nw.	Joseph P. Simons.
Florence	Florence	136	24	53.5	− 0.4	84	23	26	12	44	0.99	− 1.32	0.99	0	1	.....	.....	.....	.....	H. K. Gilbert.
Gaston Shoals	Cherokee	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.99	.....	1.62	0	3	.....	.....	.....	.....	Harry A. Parshall.
Georgetown	Georgetown	12	19	56.8	− 3.1	84	14	26	12	44	1.15	− 1.07	1.15	0	1	24	6	0	n.	A. P. Hazard.
Greenville	Greenville	989	20	50.0	+ 0.4	78	23	18	11	42	2.58	− 0.70	1.05	0	3	25	1	4	sw.	Spartan Goodlette.
Greenwood	Greenwood	671	24	52.4	+ 0.4	77	23	23	11	45	2.00	− 0.78	2.00	0	1	.....	.....	.....	.....	M. M. Calhoun.
Heath Springs	Lancaster	568	11	52.9	.....	87	17	23	11	42	2.58	.....	2.58	0	1	18	7	5	w.	J. Marvin Bowers.
Kingstree	Williamsburg	54	24	52.8	− 2.7	81	22	24	12	44	1.13	− 1.05	1.13	0	1	.....	.....	.....	.....	A. O. Matthews.
Liberty	Pickens	900	18	51.8	+ 0.9	78	16	20	11	39	1.57	− 1.11	0.70	0	5	23	3	4	w.	John T. Boggs.
Little Mountain	Newberry	711	19	54.8	+ 1.1	77	23	25	11	35	2.40	+ 0.10	2.00	T.	3	26	0	4	w.	J. M. Sease, M. D.
Meriwether	Edgefield	.....	3	53.0	.....	79	22	23	11	45	1.53	.....	1.53	0	1	.....	.....	.....	.....	William S. Middleton.
Monetta	Saluda	.....	1	55.0	.....	79	22	24	11	34	1.79	.....	1.33	T.	3	23	2	5	sw.	Joseph M. Johnson.
Newberry	Newberry	502	8	51.9	− 1.8	78	23	23	11	41	2.85	− 0.08	2.68	T.	4	18	7	5	w.	W. G. Peterson.
Pelzer	Anderson	873	7	.....	.....	.....	.....	.....	.....	.....	1.52	.....	1.30	0	3	.....	.....	.....	.....	Joshua Y. Jones.
Pinopolis	Berkeley	54	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss E. P. Ravenel.
St. George	Dorchester	109	24	54.3	− 1.4	79	8	25	12	46	1.40	− 0.53	1.40	0	1	.....	.....	.....	.....	Guy F. Parker.
St. Matthews	Orangeburg	269	24	53.8	− 1.1	80	22	25	12	43	1.70	− 0.59	1.70	0	1	.....	.....	.....	.....	J. S. Wannamaker.
Saluda	Saluda	536	10	52.8	.....	79	23	21	11	43	1.74	.....	1.39	T.	2	24	5	1	w.	Mrs. F. V. J. Maxwell.
Santuck	Union	512	17	51.4	− 0.1	75	14	24	11	37	2.66	− 0.12	2.45	T.	4	19	5	6	sw.	E. W. Jeter.
Smiths Mills	Georgetown	62	17	.....	.....	.....	.....	.....	.....	.....	1.50	− 0.99	1.50	0	1	.....	.....	.....	.....	W. G. Walker.
Society Hill	Darlington	192	15	52.2	− 0.3	89	22	25	1	45	1.71	− 0.57	1.60	T.	3	25	1	4	n.	Rev. T. Ellison Simpson.
Spartanburg	Spartanburg	875	21	50.6	− 0.9	81	23	25	11	48	1.10	− 1.68	0.90	0	2	.....	.....	.....	.....	F. P. Robinson.
Summerville	Dorchester	75	15	54.8	− 1.2	80	20	26	12	37	1.85	− 0.70	1.85	0	1	12	18	0	sw.	Miss E. H. Gadsden.
Sumter	Sumter	169	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Duane L. Wannamaker.
Trenton	Edgefield	620	15	55.6	+ 0.1	80	17	25	11	35	1.67	− 0.83	1.48	0	3	22	6	2	w.	C. A. Long.
Walterboro	Colleton	69	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Patterson.
Winnsboro	Fairfield	545	22	52.0	− 1.7	75	22	24	11	31	3.00	+ 0.82	2.50	0	2	26	3	1	sw.	J. W. Seigler.
Winthrop College	York	690	13	51.2	− 1.3	75	23	22	11	36	2.68	+ 0.26	2.00	T.	3	15	8	7	s.	W. P. Goodman.
Yemassee	Hampton	24	17	53.6	− 2.5	80	21	23	12	48	1.13	− 0.85	1.11	0	2	.....	.....	.....	.....	J. G. Hutson.
Georgia.																				
Abbeville	Wilcox	180	10	.....	.....	.....	.....	.....	.....	.....	0.93	− 1.44	0.73	0	3	23	0	7	w.	W. H. Calhoun.
Adairsville	Bartow	772	21	51.6	+ 1.2	78	22	18	11	43	0.94	− 1.79	0.50	0	3	24	0	6	.....	Mrs. R. C. Evins.
Albany	Dougherty	232	26	59.4	+ 1.6	82	7	27	11	39	0.27	− 2.01	0.27	0	1	22	6	2	ne.	George C. Brosnan.
Allapaha	Berrien	293	23	57.2	− 0.6	80	5	24	11	43	1.19	− 0.66	0.95	0	4	20	4	6	ne.	J. F. Rice.
Americus	Sumter	362	28	54.8	− 1.7	74	7†	26	11	36	0.85	− 1.88	0.70	0	3	19	7	4	w.	Joseph M. Bryan.
Athens	Clarke	694	31	51.9	+ 0.7	76	23	22	11	43	0.32	− 2.53	0.22	0	2	25	1	4	e.	C. D. Cox.
Atlanta	Fulton	1,218	48	54.8	+ 3.0	73	22	24	11	27	0.54	− 2.79	0.23	T.	3	14	10	6	e.	U. S. Weather Bureau.
Augusta	Richmond	180	67	54.4	0.0	76	21	28	11	38	1.95	− 0.71	1.90	0	4	14	3	13	nw.	Do.
Bainbridge	Decatur	119	21	58.4	0.0	80	5†	26	11†	48	0.37	− 1.13	0.20	0	2	21	2	7	se.	W. H. Morrow.
Butler	Taylor	650	12	.....	.....	.....	.....	.....	.....	.....	1.36	− 1.04	1.23	0	3	25	1	4	ne.	Mrs. Mamie F. Wallace.
Camak	Warren	613	21	55.4	+ 1.5	79	4†	24	11	48	1.57	− 0.57	1.40	0	3	16	7	7	w.	J. A. Chapman.
Canton	Cherokee	894	22	.....	.....	.....	.....	.....	.....	.....	1.43	− 1.83	1.10	T.	3	21	4	5	nw.	Mrs. Ada P. Mills.
Carlton	Madison	557	14	.....	.....	.....	.....	.....	.....	.....	0.58	− 1.54	0.38	0	3	24	0	6	w.	M. C. Power.
Clayton	Rabun	2,100	19	49.0	+ 0.6	74	23	16	11	39	1.88	− 1.64	1.08	T.	2	25	1	4	w.	A. J. Duncan.
Columbus	Muscogee	262	25	57.2	+ 1.5	79	21†	26	11†	39	0.78	− 1.85	0.55	T.	4	21	3	6	e.	A. J. Land.
Concord	Pike	850	.....	53.4	.....	74	21†	24	11	36	0.44	.....	0.27	0	3	25	1	4	.....	C. T. Smith.
Covington	Newton	800	21	.....	.....	.....	.....	.....	.....	.....	0.25	− 2.47	0.25	T.	1	13	6	11	e.	Mrs. Sarah E. Cruse.
Dahlonega	Lumpkin	1,519	21	50.1	+ 0.1	73	23	21	11	38	1.34	− 2.02	0.85	T.	4	11	17	2	sw.	Prof. B. P. Gaillard.
Dublin	Laurens	452	19	54.1	.....	78	21	25	12	44	1.65	− 0.86	1.40	0	4	19	6	5	n.	Mrs. M. E. Martin.
Eastman	Dodge	351	21	56.5	− 1.5	80	5†	24	11	42	1.32	− 0.58	0.99	0	4	15	8	7	.....	Mrs. Grace Bohannon.
Eatonton	Putnam	577	9	54.2	.....	77	20†	19	11	44	0.99	− 1.17	0.88	0	2	.....	.....	.....	.....	Prof. W. C. Wright.
Elberton	Elbert	710	21	53.6	+ 0.5	78	4	20	11	36	1.37	− 1.27	0.85	T.	4	24	3	3	e.	H. A. Roebuck.
Experiment	Spalding	946	12	55.0	+ 1.3	74	22†	26	11	32	0.32	− 1.92	0.32	T.	1	.....	.....	.....	.....	J. H. Kimburgh.
Fort Gaines	Clay	116	25	57.6	+ 1.4	79	5†	27	11	43	0.00	− 2.52	0.00	0	0	26	0	4	ne.	Miss Eva T. Graham.
Gainesville	Hall	1,254	34	48.4	− 1.4	75	23	15	11	48	0.43	− 2.86	0.20	0	3	23	0	7	w.	W. C. Walker.
Gillsville	do	1,052	21	.....	.....	.....	.....	.....	.....	.....	0.31	− 2.24	0.26	T.	2	24	0	6	n.	George W. Lichtenstine.
Glennville	Tattnall	.....	8	57.0	.....	78	8	28	12	32	1.09	.....	1.07	0	2	21	6	3	nw.	Miss Fannie Barnard.
Gore	Chattooga	729	14	51.6	+ 2.1	77	23	17	11	43	0.86	− 2.08	0.42	T.	4	19	6	5	s.	H. M. Ponder.

TABLE 1.—*Climatological data for November, 1913. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Georgia*—Continued.**																				
Granite Hill	Hancock		1	56.0	.....	75	4†	29	11	41	1.20	.....	1.20	0	1	...	...	...	.....	James T. McGee.
Greensboro	Greene	598	11	52.4	− 0.1	78	22†	21	11	41	1.20	− 1.46	0.93	0	3	21	5	4	w.	R. L. Caldwell
Griffin	Spalding	975	24	.....	.....	...	...	...	...	...	0.48	− 1.83	0.27	0	2	19	7	4	n.	J. M. Mathews.
Hartwell	Hart	838	3	54.5	.....	78	22	22	11	33	.....	.....	.....	...	...	15	12	3	sw.	W. B. McMullan.
Hawkinsville	Pulaski	235	17	.....	.....	...	...	...	...	...	0.60	− 1.81	0.60	0	1	...	...	...	.....	R. H. Wood.
Highland Dam	Muscogee	.....	...	.....	.....	...	...	...	...	...	0.88	.....	0.40	0	4	20	4	6	.....	F. C. Tibbs.
Jesup	Wayne	101	18	58.2	− 0.3	82	8	26	11	41	1.25	− 1.23	1.25	0	1	12	16	2	nw.	W. L. Belcher.
Lisbon	Lincoln	326	6	51.6	.....	77	22†	19	11	44	1.46	.....	1.40	0	4	17	6	7	.....	B. J. DuBose.
Lost Mountain	Cobb	1,175	13	51.3	− 0.8	74	23	23	11	37	0.72	− 2.00	0.35	0	3	6	22	2	e.	A. N. Mayes.
Louisville	Jefferson	259	20	.....	.....	...	...	26	11†	....	1.86	− 0.35	1.63	0	3	20	8	2	.....	J. C. Little.
Lumber City	Telfair	150	4	.....	.....	...	...	...	...	...	1.11	.....	0.90	0	5	15	2	13	e.	Walter A. Hilton.
Lumpkin	Stewart	650	18	59.8	+ 1.9	78	16	28	11	28	0.26	− 2.17	0.16	0	2	24	4	2	nw.	R. T. Humber.
Macon	Bibb	370	32	54.2	− 0.4	76	23	26	11	38	1.14	− 1.75	1.04	0	3	16	7	7	nw.	U. S. Weather Bureau.
Marshallville	Macon	500	20	56.7	0.0	78	21†	25	11	43	1.38	− 1.42	1.21	0	3	21	3	6	w.	E. C. Bryan.
Milledgeville	Baldwin	276	25	52.6	− 0.9	74	15†	25	11	40	1.44	− 0.84	1.18	0	4	23	2	5	ne.	Prof. O. M. Cone.
Millen	Jenkins	158	25	.....	.....	...	...	25	12	....	1.50	− 0.47	1.50	0	1	27	0	3	nw.	M. G. McComb.
Mineral Bluff	Fannin	1,571	....	48.0	.....	75	24	17	11	42	0.13	.....	0.08	0	4	20	3	7	.....	W. T. S. Dickey.
Montezuma	Macon	292	8	.....	.....	...	...	...	...	...	0.05	.....	0.03	0	2	18	1	11	ne.	J. C. Collins.
Monticello	Jasper	800	18	54.8	− 0.3	78	22	23	11	40	0.83	− 1.77	0.63	0	4	27	3	0	.....	Miss Maude Penn.
Newnan	Coweta	959	24	55.6	+ 3.2	75	21†	24	11	37	0.51	− 2.31	0.21	0	3	18	7	5	w.	Mrs. Ida J. Milner.
Norcross	Gwinnett	1,078	3	.....	.....	...	...	...	...	...	0.22	.....	0.10	0	3	21	4	5	.....	W. O. Medlock.
Point Peter	Oglethorpe	600	23	51.0	− 0.3	76	22	23	11	42	0.66	− 2.08	0.60	0	2	22	4	4	.....	C. M. Witcher.
Poulan	Worth	365	23	59.2	+ 2.3	82	7	23	11	45	0.68	− 1.57	0.67	0	2	13	16	1	.....	C. T. Merritt.
Putnam	Marion	.....	13	55.0	− 1.8	78	21	23	11	41	0.76	− 1.77	0.76	0	1	18	9	3	sw.	Miss Mildred Collum.
Quitman	Brooks	173	27	60.3	+ 0.9	81	21†	29	12	38	0.61	− 1.38	0.52	0	2	21	0	9	ne.	A. B. Jones.
Ramhurst	Murray	900	20	52.8	+ 0.7	75	22†	14	11	43	0.97	− 2.04	0.52	T.	4	18	6	6	s.	D. E. Humphreys.
Resaca	Gordon	657	19	.....	.....	...	...	...	...	...	1.03	− 2.03	0.56	0	2	28	0	2	n.	D. A. Norton.
Rome	Floyd	576	54	50.8	− 0.4	76	21	19	11†	42	0.97	− 2.34	0.45	T.	4	25	0	5	n.	W. M. Towers.
St. George	Charlton	50	6	59.8	.....	83	22	26	12	40	1.17	.....	0.85	0	4	23	7	0	ne.	A. N. Lund.
Savannah	Chatham	65	62	58.8	+ 0.6	78	23	32	11	28	1.80	− 0.33	1.80	0	1	17	9	4	ne.	U. S. Weather Bureau.
Statesboro	Bulloch	253	13	57.7	+ 0.3	81	8	27	12	40	1.43	− 0.63	1.42	0	2	19	10	1	w.	W. C. Cromley.
Talbotton	Talbot	750	19	57.6	+ 2.8	80	19†	25	11	44	0.90	− 2.14	0.70	0	3	18	0	12	nw.	Dr. E. L. Bardwell.
Tallapoosa	Haralson	1,150	14	51.4	− 0.6	76	14	21	11	43	0.68	− 2.00	0.22	T.	4	9	12	9	nw.	C. C. Sigman.
Thomasville	Thomas	273	31	59.8	+ 0.6	79	21	28	11	36	0.51	− 2.09	0.36	0	2	16	5	9	e.	U. S. Weather Bureau.
Toccoa	Stephens	1,050	27	52.6	+ 2.1	80	23	20	11	45	0.73	− 2.26	0.32	T.	3	22	2	6	w.	Miss Marian L. Craig.
Valdosta	Lowndes	220	8	61.0	.....	89	22	32	11	42	0.90	.....	0.90	0	1	28	0	2	s.	Miss Annie Twitty.
Washington	Wilkes	630	22	53.8	+ 1.0	77	22	20	11	36	1.60	− 1.12	1.42	0	3	22	2	6	ne.	Miss Ella B. Smith.
Wayeross	Ware	131	24	60.4	+ 0.9	81	23	30	11	37	3.67	+ 2.09	2.21	0	5	17	10	3	nw.	Dr. J. F. Wilson.
Waynesboro	Burke	86	21	55.6	+ 0.9	78	21	26	11†	40	1.43	− 0.35	1.40	0	2	20	7	3	w.	Mrs. H. W. Blount.
West Point	Troup	620	23	53.7	− 0.5	78	22	22	11	42	0.45	− 2.35	0.15	0	3	17	4	9	se.	E. N. Dunn.
Woodbury	Meriwether	641	12	.....	.....	...	...	...	...	...	0.34	− 2.06	0.19	0	2	23	2	5	.....	E. T. Riggins.
Florida.																				
Apalachicola	Franklin	24	9	62.8	.....	79	8	34	10	30	0.45	.....	0.33	0	2	22	5	3	e.	A. F. Whiteside.
Arcadia	De Soto	61	12	68.7	+ 1.3	86	28	40	12	30	0.86	− 0.48	0.79	0	2	12	15	3	e.	C. S. Bushnell.
Archer	Alachua	92	28	66.2	+ 3.3	81	7†	30	10†	36	0.16	− 2.04	0.15	0	2	...	...	...	.....	R. B. Hodgson.
Avon Park	De Soto	150	14	67.4	− 0.4	85	21	43	12	28	0.48	− 1.23	0.32	0	4	11	17	2	ne.	William King.
Bartow	Polk	115	25	65.8	− 0.8	85	7	30	12	39	0.33	− 1.35	0.11	0	4	4	14	12	ne.	William Hood.
Bassenger	Osceola	.....	...	66.9	.....	84	7†	36	10†	34	0.36	.....	0.36	0	1	17	7	6	.....	L. M. Kline.
Bradentown	Manatee	22	29	67.9	+ 1.0	87	7	40	12	31	0.49	− 1.11	0.49	0	1	22	8	0	ne.	F. H. Braymer, M. D.
Bristol	Liberty	.....	...	.....	.....	...	...	...	...	...	1.00	.....	0.58	0	2	...	...	...	.....	J. N. Harrell.
Brooksville (1)	Hernando	126	20	67.1	+ 1.7	84	21†	33[a]	10	35[a]	0.15	− 1.45	0.15	0	1	16	7	7	ne.	C. C. Peck.
Brooksville (2)	....do	.....	3	63.6	.....	87	24	25	10	41	0.78	.....	0.65	0	6	12	4	14	ne.	William Gomme.
Carabelle	Franklin	10	14	60.8	− 2.1	80	4†	30	12	31	0.21	− 1.82	0.21	0	1	...	...	...	.....	J. J. Blomquist.
Cedar Keys	Levy	10	24	68.0	+ 4.8	86	5†	39	10	35	0.38	− 1.97	0.24	0	2	26	0	4	e.	S. T. White.
Clermont	Lake	105	19	67.5	0.0	84	7†	37	10	37	0.20	− 1.01	0.20	0	1	17	13	0	e.	S. S. Fesler.
Crescent City	Putnam	.....	15	66.4	+ 2.2	85	22	32	10	38	0.33	− 1.35	0.12	0	4	14	10	6	.....	Walter Cliff.
De Funiak Springs	Walton	193	14	60.1	+ 1.0	78	21†	29[a]	11	36[a]	0.71	− 2.89	0.49	0	3	19	10	1	ne.	W. O. H. Shepard.
De Land	Volusia	27	16	63.6	− 0.8	84	7†	26	12	48	0.61	.....	0.26	0	4	21	5	4	nw.	Rev. W. J. Harkness.
Eustis	Lake	56	22	66.8	+ 1.3	86	6	33	12	42	0.47	− 1.00	0.18	0	4	15	10	5	e.	C. T. Smith.
Federal Point	Putnam	10	21	64.9	+ 1.2	82	5	33	12	35	0.60	− 1.54	0.34	0	8	17	9	4	ne.	E. S. Hubbard.
Fellsmere	St. Lucie	.....	1	.....	.....	...	...	...	...	...	0.69	.....	0.44	0	4	8	14	8	e.	W. A. James.
Fernandina	Nassau	10	20	64.6	+ 2.5	83	17†	35	10†	47	0.52	− 1.96	0.30	0	3	23	0	7	ne.	T. C. Borden.
Fort Lauderdale	Dade	10	1	.....	.....	...	...	41	11	...	3.08	.....	1.53	0	13	1	23	6	.....	W. M. Heine.
Fort Meade	Polk	125	23	66.1	− 0.7	87	5	33	12	41	0.85	− 0.54	0.73	0	2	17	6	7	ne.	G. L. Brodrick.
Fort Myers	Lee	12	40	69.2	− 0.4	83	7†	45	12	25	1.85	+ 0.59	1.05	0	4	16	13	1	ne.	W. F. Gwynne.
Fort Pierce	St. Lucie	10	12	70.4[a]	+ 1.9	81[a]	21	40[a]	10	25[a]	0.36	− 3.06	0.29	0	3	9	9	12	ne.	T. C. Nicholson.
Gainesville	Alachua	176	17	64.2	+ 1.3	83	16	30	10†	35	0.29	− 1.56	0.24	0	2	13	11	6	e.	John Schnabel.
Garniers (near)	Walton	22	1	.....	.....	81	24	...	...	...	1.57	.....	1.20	0	3	27	0	3	se.	U. S. Forest Service.
Grasmere	Orange	175	15	65.1	− 0.8	84	7	30	10	37	0.17	.....	0.10	0	3	21	9	0	ne.	J. B. Escott.
Griffin	Dade	.....	...	.....	.....	...	...	36	11	33	3.08	.....	1.41	0	13	11	11	8	e.	T. M. Griffin.
Hilliard	Nassau	69	4	60.9	.....	81	23	26	12	38	0.68	.....	0.68	0	1	17	13	0	.....	B. A. Tibbits.
Homestead	Dade	12	3	71.7	.....	85	4†	43	11	32	5.28	.....	5.80	0	9	7	16	7	e.	J. A. Kahl.
Hypoluxo	Palm Beach	9	17	71.4	− 1.1	83	16	42	11	28	1.64	− 1.54	0.35	0	10	13	12	5	ne.	G. A. Angevine.
Inverness	Citrus	43	13	63.4	+ 0.6	83	7	30	12	38	0.15	− 1.23	0.15	0	1	3	27	0	ne.	W. H. Miller.
Jacksonville	Duval	108	43	63.2	+ 1.9	80	24	35	11	25	0.32	− 1.87	0.26	0	4	15	8	7	ne.	U. S. Weather Bureau.
Jasper	Hamilton	152	12	60.3	− 0.6	80	21†	27	11†	38	1.75	+ 0.35	1.75	0	1	13	13	4	ne.	Mrs. W. C. Caldwell.
Johnstown	Bradford	125	13	62.6	+ 1.6	81	16	27	12	37	0.52	− 1.03	0.52	0	1	13	15	2	.....	A. M. C. Brasch.
Key West	Monroe	14	42	73.4	− 0.9	83	8	57	11	18	1.36	− 1.00	1.05	0	8	9	11	10	ne.	U. S. Weather Bureau.
Kissimmee	Osceola	65	20	67.4	+ 0.2	84	21†	37	10	33	0.30	− 1.51	0.20	0	3	4	14	12	ne.	J. A. Simpson.
Lake City	Columbia	210	28	62.6	+ 1.0	81	23	29	10	34	0.75	− 1.92	0.75	0	1	9	11	10	ne.	W. B. Knight.
Live Oak	Suwanee	109	13	62.4	.....	83	23	26	12	41	0.76	− 1.50	0.76	0	1	15	8	7	ne.	Rev. J. A. Montgomery.
Lock No. 1	Dade	.....	...	.....	.....	...	...	...	...	...	1.89	.....	0.56	0	11	...	...	...	.....	H. M. Forman.
Lucerne Park	Polk	.....	1	67.8	.....	84	7	39	10	30	0.84	.....	0.29	0	5	1	26	3	ne.	L. D. Niles.
Macclenny	Baker	125	16	.....	.....	...	...	28[e]	12	....	2.00	+ 0.53	2.00	0	1	9	21	0	.....	Griffing Bros.
Madison	Madison	200	13	61.2	− 0.1	80	22†	31	11	32	1.10	− 0.60	1.05	0	3	9	8	13	ne.	E. J. Vann.
Malabar	Brevard	24	19	68.6	+ 0.1	84	21	34	10	30	1.97	− 0.27	1.03	0	6	19	6	5	e.	J. F. Farley.
Marianna	Jackson	80	10	61.8	+ 3.4	85	25	28	10	48	0.05	− 2.90	0.05	0	1	13	9	8	n.	W. W. Brooks.
Merritts Island	Brevard	20	30	68.0	− 0.6	79	6†	41	10	28	0.68	− 1.52	0.26	0	6	13	13	4	né.	F. Ulrich.
Miami (1)	Dade	47	11	71.4	− 0.6	82	7	48	11	22	4.39	+ 1.84	1.35	0	17	6	7	17	ne.	U. S. Weather Bureau.
Miami (2)	....do	10	3	.....	.....	87[d]	17	...	...	...	.....	.....	.....	...	...	...	...	...	ne.	Edward Simmonds.
Middleburg	Clay	10	12	.....	.....	...	...	27	10	....	0.62	− 0.74	0.54	0	2	...	...	...	.....	G. A. Chalker.
Molino	Escambia	49	11	60.1	+ 1.4	83	16	32	10†	40	2.55	− 1.11	2.55	0	1	22	5	3	e.	W. H. Trimmer.

TABLE 1.—*Climatological data for November, 1913. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Florida—Continued.																				
Newport	Wakulla	.....	11	60.6	+ 2.3	81	28	28	10†	40	1.21	— 2.48	1.21	0	1	18	10	2	s.	Nathaniel Brewer, jr.
New Smyrna	Volusia	9	28	66.2	+ 1.2	83	16	33	10†	31	1.13	— 1.61	0.48	0	4	4	26	0	ne.	F. J. Nordman.
Orange City	....do	39	19	65.4	+ 0.8	89	24	29	12	45	1.07	— 0.61	0.61	0	4	20	5	5	e.	J. D. Graham.
Orlando	Orange	111	20	67.0	+ 0.6	84	16†	35	10†	36	0.17	— 1.30	0.17	0	1	7	12	11	e.	James Thomson.
Panama City	Washington	.....	....	60.0	+ 0.3	78	7	32	11	34	0.61	— 2.54	0.41	0	2	27	3	0	ne.	E. H. Goodson.
Pensacola	Escambia	149	33	61.6	+ 2.0	77	24	38	10	22	2.19	— 1.55	1.96	0	3	14	8	8	ne.	U. S. Weather Bureau.
Pinellas Park	Pinellas	20	2	67.7	.....	83	5†	35	12	34	0.82	.....	0.72	0	2	9	21	0	nw.	Miss E. Borgman.
Plant City	Hillsboro	121	19	66.9	+ 0.7	82	7	34	12	34	0.24	— 1.09	0.24	0	1	20	10	0	n.	E. B. Trask.
Rockwell	Marion	10	11	65.0[i]	+ 0.7	83[i]	7	30[i]	12	32[i]	T.	— 1.65	T.	0	0	....	....	....	se.	Dunellon Phosphate Co.
St. Augustine	St. Johns	10	61	65.5	+ 1.5	84	16	32	10	35	0.75	— 1.57	0.25	0	4	30	0	0	ne.	E. F. Joyce.
St. Cloud	Osceola	.....	....	66.2	.....	85	16	34	10	34	0.11	.....	0.11	0	1	16	6	8	e.	J. T. Bearss.
St. Leo	Pasco	140	16	67.0	+ 0.9	84	6†	37	10†	32	0.23	— 1.38	0.10	0	4	18	10	2	ne.	Gerard Schneider.
Sand Key	Monroe	.....	1	72.8	.....	79	8	61	12	10	1.34	.....	0.93	0	8	12	10	8	ne.	U. S. Weather Bureau.
Sanford	Seminole	25	5	66.0	.....	82	23	35	10	32	0.36	.....	0.20	0	3	12	12	6	ne.	H. C. Dubose.
Satsuma Heights	Putnam	98	5	63.2	.....	80	8	31	12	35	0.25	.....	0.15	0	3	17	9	4	ne.	Satsuma Company.
Switzerland	St. Johns	10	20	63.6[a]	+ 1.4	82[a]	8†	31[a]	12	36[a]	1.16	— 1.01	0.53	0	3	....	....	....	....	Mrs. W. C. Steele.
Tallahassee	Leon	192	26	61.4	+ 1.8	80	21†	31	10	28	0.81	— 1.73	0.72	0	2	16	9	5	e.	W. H. Markham.
Tampa	Hillsboro	79	23	67.4	+ 2.0	83	7	40	10	28	0.27	— 1.45	0.27	0	2	4	17	9	ne.	U. S. Weather Bureau.
Tarpon Springs	Pinellas	20	28	67.7	+ 2.3	87	7	34	12	35	0.34	— 1.37	0.21	0	2	21	7	2	e.	A. P. Albaugh, M. D.
Titusville	Brevard	16	17	67.2	+ 1.3	84	21	32	10	30	0.80	— 1.68	0.46	0	7	9	10	11	e.	F. M. Taylor.
Zona	Dade	.....	....	69.4	.....	86	16	36	11	35	2.53	.....	0.98	0	16	....	....	....	e.	J. B. Mann.
Alabama.																				
Alaga	Houston	105	8	.....	.....	.....	.....	.....	.....	.....	0.46	.....	0.46	0	1	.....	.....	.....	.....	James L. Willis.
Andalusia	Covington	488	1	66.4	.....	84	20	40	9	35	0.20	.....	0.20	0	1	28	1	1	.....	T. E. Baisden.
Anniston	Calhoun	728	22	54.3	+ 2.4	76	22	21	11	39	0.95	— 2.45	0.88	0	4	17	8	5	se.	U. S. Weather Bureau.
Ashville	St. Clair	685	20	50.8	— 0.8	75	21†	21	11	45	0.83	— 1.78	0.40	0	4	20	5	5	.....	A. L. Cather.
Auburn	Lee	732	31	58.4	+ 3.8	78	23	28	10†	36	0.50	— 3.14	0.30	0	4	18	7	5	s.	Dr. James T. Anderson.
Bay Minette	Baldwin	268	....	.....	.....	.....	.....	.....	.....	.....	1.53	.....	1.53	0	2	.....	.....	.....	.....	J. M. Franklin.
Benton	Lowndes	149	12	.....	.....	.....	.....	.....	.....	.....	0.58	— 2.60	0.50	0	2	.....	.....	.....	.....	S. T. Pruitt.
Bermuda	Conecuh	.....	26	57.8[d]	+ 1.3	81	21†	26	11	41[d]	1.03	— 1.95	1.03	0	1	19	9	2	se.	M. J. Morris.
Birmingham	Jefferson	701	25	57.8	+ 3.7	76	21	26	11	31	3.24	— 0.15	2.35	0	5	15	12	3	se.	U. S. Weather Bureau.
Calera	Shelby	500	12	.....	.....	.....	.....	.....	.....	.....	0.95	— 1.55	0.70	0	2	.....	.....	.....	.....	L. G. Privett.
Camp Hill	Tallapoosa	738	12	56.2	.....	81	20	22	12	47	0.80	— 1.83	0.39	0	3	13	13	4	s.	Dr. Lyman Ward.
Citronelle	Mobile	331	25	62.2	+ 2.4	82	21†	31	10	36	2.06	— 0.82	2.06	0	2	17	10	3	se.	Rev. W. H. Rowe.
Clanton	Chilton	590	20	55.5	+ 1.3	79	22	26	11	41	0.64	— 2.22	0.50	0	3	.....	.....	.....	.....	Joseph B. Downs.
Cochrane	Pickens	100	3	.....	.....	.....	.....	.....	.....	.....	2.14	.....	1.79	0	3	.....	.....	.....	.....	T. H. G. Cooke.
Cordova	Walker	334	22	55.2	+ 3.4	79	22	20	11	44	2.10	— 0.83	1.00	0	4	22	0	8	.....	Scott Maxwell.
Cullman	Cullman	802	5	52.6	.....	78	21†	19	11	41	0.98	.....	0.78	0	2	18	11	1	se.	Eugene A. Grayot.
Dadeville	Tallapoosa	760	8	.....	.....	.....	.....	.....	.....	.....	0.38	.....	0.28	0	2	.....	.....	.....	.....	Dr. W. B. Fulton.
Daphne	Baldwin	.....	22	62.2	+ 2.5	81	21†	34	11	32	3.92	+ 1.34	2.12	0	2	22	6	2	e.	John H. Young.
Demopolis	Marengo	.....	21	.....	.....	.....	.....	.....	.....	.....	1.99	— 0.28	1.75	0	4	.....	.....	.....	.....	George E. Pegram.
Eufaula	Barbour	200	29	53.6	— 2.0	75	16†	24	11	43[e]	0.45	— 2.39	0.34	0	4	.....	.....	.....	.....	Dr. J. B. Whitlock.
Evergreen	Conecuh	285	29	60.0	+ 3.5	88	21	24	10†	50	1.10	— 2.07	1.10	0	1	.....	.....	.....	.....	George W. Salter.
Flomaton	Escambia	91	21	59.0	+ 4.9	81	20†	26	10†	45	1.52	— 1.61	1.52	0	1	25	3	2	s.	T. J. Farris.
Fort Deposit	Lowndes	520	29	60.8	+ 5.1	77	7†	34	11	26	0.60	— 2.27	0.60	0	1	.....	.....	.....	.....	J. F. Hattemer.
Gadsden	Etowah	621	29	54.3	+ 2.7	79	23	22	11	41	0.92	— 2.08	0.59	0	3	.....	.....	.....	.....	D. P. Goodhue.
Goodwater	Coosa	826	18	.....	.....	.....	.....	21	11	....	0.93	— 1.95	0.46	0	3	.....	.....	.....	.....	Miss Daisy Buice.
Greensboro	Hale	220	34	58.2	+ 2.8	77	22	30	11	32	1.76	— 1.72	1.30	0	4	23	2	5	s.	W. E. W. Yerby.
Greenville	Butler	444	12	.....	.....	.....	.....	.....	.....	.....	2.08	— 1.02	1.84	0	2	.....	.....	.....	.....	E. M. Lewis.
Hamilton	Marion	.....	17	54.8[h]	+ 1.8	83	22	18	11	44[h]	0.91	— 2.27	0.43	0	3	.....	.....	.....	.....	Prof. H. O. Sargent.
Healing Springs	Washington	362	1	.....	.....	.....	.....	.....	.....	.....	2.57	.....	2.21	0	2	.....	.....	.....	.....	James E. Lipscomb.
Highland Home	Crenshaw	.....	21	55.2	— 2.0	81	23	29	11	35	1.08	— 2.04	0.75	0	2	18	8	4	s.	Prof. Samuel Jordan.
Livingston	Sumter	160	29	56.0	+ 2.2	77	23	25	11	40	2.44	— 0.41	1.99	0	3	.....	.....	.....	w.	Robert L. King.
Lock No. 4	Talladega	510	16	53.4	+ 1.3	76	21†	22	11	41	1.00	— 1.11	0.60	0	4	.....	.....	.....	.....	U. S. Engineers.
Maple Grove	Cherokee	.....	20	53.0	+ 2.4	78	21†	20	11	43	3.05	+ 0.04	2.33	T.	4	.....	.....	.....	.....	Mrs. A. L. Awbrey.
Mentone	Dekalb	1,595	6	.....	.....	.....	.....	.....	.....	.....	0.99	.....	0.70	T.	3	.....	.....	.....	.....	E. Mason.
Milstead	Macon	.....	10	.....	.....	.....	.....	.....	.....	.....	0.82	.....	0.60	0	3	.....	.....	.....	.....	W. U. Wall.
Mobile	Mobile	84	41	61.4	+ 3.9	80	16	38	10	27	3.75	+ 0.01	3.75	0	2	15	11	4	n.	U. S. Weather Bureau.
Montgomery	Montgomery	240	41	58.0	+ 2.3	80	22	32	11	35	0.87	— 2.26	0.83	0	3	18	8	4	se.	Do.
Newbern	Hale	.....	21	59.4	+ 3.8	83	22	24	11	41	1.49	— 1.03	1.38	0	2	17	10	3	e.	Dr. J. Huggins.
Oneonta	Blount	857	19	53.6	+ 3.1	78	22	18	11	43	1.26	— 1.39	0.46	0	4	15	9	6	s.	Aquilla J. Ketchum.
Opelika	Lee	917	34	57.2	+ 2.6	75	21	26	11	37	0.50	— 2.62	0.28	0	2	.....	.....	.....	.....	A. H. Read, jr.
Ozark	Dale	400	11	60.0	.....	84	23	26	12	33	0.25	.....	0.25	0	1	.....	.....	.....	.....	James A. Scott.
Prattville	Autauga	281	13	55.0	.....	77	23	23	11	39[b]	0.52	.....	0.52	0	1	22	5	3	.....	Joseph B. Bell.
Pushmataha	Choctaw	.....	22	.....	.....	.....	.....	.....	.....	.....	2.73	— 0.08	1.66	0	2	.....	.....	.....	.....	W. N. Horn.
Robertsdale	Baldwin	148	1	.....	.....	.....	.....	.....	.....	.....	2.58	.....	1.55	0	2	.....	.....	.....	.....	Carl Boseck.
Selma	Dallas	147	33	57.4	+ 2.1	88	22	25	11	44	0.49	— 2.55	0.43	0	2	.....	.....	.....	.....	Charles F. Brislin.
Spring Hill	Mobile	312	9	60.2	.....	81	22	33	10	29	2.99	.....	2.97	0	2	10	17	3	se.	Spring Hill College.
Talladega	Talladega	554	23	54.0	+ 0.7	76	7	20	11	40	1.51	— 1.42	0.70	0	3	19	6	5	n.	J. W. Vandiver.
Tallassee	Elmore	.....	22	.....	.....	.....	.....	.....	.....	.....	0.62	— 2.20	0.44	0	4	.....	.....	.....	.....	P. A. Noble.
Thomasville	Clarke	385	22	57.6	+ 2.0	83	21†	27	11	41	1.51	— 1.09	1.22	0	2	.....	.....	.....	.....	Miss H. T. Forster.
Troy	Pike	581	5	60.2	.....	82	23	28	10	37	0.78	.....	0.62	0	4	11	18	1	e.	Frank L. Zimmermann.
Tuscaloosa	Tuscaloosa	230	32	56.2	+ 3.3	82	23	26	11†	45	1.00	— 1.92	0.70	0	4	.....	.....	.....	.....	W. S. Wyman, jr.
Tuskegee	Macon	.....	13	56.8	— 0.5	80	21†	24	11	44	0.77	— 2.08	0.67	0	3	12	18	0	n.	Prof. George W. Carver.
Union Springs	Bullock	216	26	56.9	+ 1.7	76	22†	27	10	30	1.55	— 1.72	1.10	0	3	.....	.....	.....	.....	P. L. Cowan.
Uniontown	Perry	273	27	59.3	+ 3.3	82	7†	28	11	44	1.25	— 1.55	1.25	0	1	14	13	3	e.	L. H. Moore.
Valley Head	Dekalb	1,031	28	52.0	+ 3.1	75	21	18	11	43[b]	1.50	— 1.62	0.60	1.0	4	23	1	6	.....	M. T. Floyd, M. D.
Wetumpka	Elmore	205	21	57.2	+ 1.1	84	20†	24	11	50	0.61	— 2.33	0.45	0	2	.....	.....	.....	.....	Mrs. Emmie Callaway.
Mississippi.																				
Aberdeen	Monroe	210	25	56.5	+ 5.5	80	22	23	11	40	1.60	— 1.45	1.29	0	3	20	5	5	s.	L. D. Godfrey, jr.
Agricultural College	Oktibbeha	424	23	59.0	+ 5.0	85	20	30	11	36	2.63	— 0.34	1.53	0	4	15	12	3	se.	J. R. Ricks.
Bay St. Louis	Hancock	28	20	62.8	+ 2.7	81	16	32	10	32	2.10	— 0.85	1.14	0	5	17	8	5	e.	Brother Matthew.
Bay Springs	Jasper	406	....	.....	.....	.....	.....	.....	.....	.....	4.40	.....	2.70	0	2	26	2	2	.....	O. P. Foley.
Biloxi	Harrison	24	22	63.4	+ 3.6	78	21	37	10†	25	2.29	— 0.61	1.40	0	3	....	....	....	se.	Miss M. Josie Pope.
Booneville	Prentiss	504	19	54.9	+ 3.1	74	15	23	11	35	1.02	— 2.75	0.68	0	4	18	10	2	se.	Dr. D. T. Price.
Brookhaven	Lincoln	500	25	61.2	+ 4.6	83	17	29	10	45	1.87	— 1.04	1.22	0	2	14	2	14	e.	W. J. Bee.
Collins	Covington	.....	....	59.2	.....	82	21	25	10	42	5.79	.....	3.70	0	2	26	1	3	e.	G. P. Sledge.
Columbia	Marion	110	9	.....	.....	.....	.....	.....	.....	.....	6.27	.....	4.41	0	4	14	6	10	nw.	N. R. Drummond.
Columbus	Lowndes	191	25	56.9	+ 3.4	82	23	26	11	46	2.05	— 2.36	1.08	0	4	18	3	9	ne.	J. B. Love.
Crystal Springs	Copiah	468	21	61.0	+ 4.5	83	22	29	10†	47	3.13	+ 0.14	2.13	0	2	23	5	2	.....	D. H. Miller.

TABLE 1.—*Climatological data for November, 1913. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
***Mississippi*—Contd.**																			
Edinburg	Leake		5	56.4	.....	79	22	24	11	43	2.36	.....	1.76	0	2	...	...	...	s.	J. Y. Blocker.
Enterprise	Clarke	248	8	...	.....	...	...	...	...	...	3.79	.....	2.94	0	2	18	4	8	se.	J. B. Thompson.
Fulton	Itawamba		4	...	.....	...	...	...	...	...	1.35	.....	0.85	0	3	16	12	2	s.	A. D. Graham.
Hattiesburg	Forrest	189	20	...	.....	84	21	...	...	...	3.62	+ 0.51	2.04	0	2	12	0	18	s.	T. C. Spence.
Hazlehurst	Copiah	460	23	60.4	+ 3.5	81	21	29	10†	46	2.90	− 0.16	1.67	0	2	9	3	18	se.	J. D. Granberry.
Hickory	Newton	326	3	...	.....	...	...	...	...	...	3.90	.....	2.20	0	2	...	...	...	n.	T. N. McMullen.
Jackson	Hinds	280	26	61.6	+ 6.6	85	23	27	11	46	3.17	− 0.34	2.21	0	6	15	7	8	ne.	A. S. Nall.
Lake	Scott	446	25	57.2	+ 4.1	79	23	28	11	38	2.94	+ 0.20	1.76	0	2	14	5	11	ne.	Mrs. Eddie McNeel.
Laurel	Jones	241	9	59.7	.....	83	23	26	11	42	4.10	.....	2.90	0	2	20	5	5	se.	Thomas W. Flynt.
Leakesville	Greene		19	...	.....	83	21	25	10	45	4.19	+ 1.18	.....	0	2	...	...	...	.....	Dr. Sam Pool.
Louisville	Winston	561	24	59.0	+ 4.6	83	23	27	11	50	2.12	− 0.78	1.70	0	2	...	...	...	.....	B. T. Webster.
McNeill	Pearl River	230	10	62.5	+ 2.9	81	17	30	10	37	2.31	+ 0.01	1.20	0	3	...	...	...	se.	Prof. E. B. Ferris.
Macon	Noxubee	185	25	55.8	+ 1.6	81	23	22	11	44	1.88	− 0.52	1.80	0	2	...	...	...	e.	Finis E. Carleton.
Magnolia	Pike	415	17	62.2	+ 4.0	81	17	29	10	38	3.89	+ 0.92	2.30	0	4	11	15	4	se.	Miss Ruby V. Roberts.
Meridian	Lauderdale	375	23	57.7	+ 4.5	78	23	28	11	36	3.41	− 0.73	3.24	0	2	12	7	11	e.	U. S. Weather Bureau.
Merrill	George	76	8	...	.....	...	...	...	...	...	4.53	.....	3.75	0	2	18	0	12	n.	James E. Walters.
Monticello	Lawrence	209	6	58.6	.....	81	17	27	10	44	3.43	.....	2.20	0	3	23	6	1	se.	Dr. G. A. Teunisson.
Okolona	Chickasaw	311	25	55.3	+ 3.3	78	22†	25	11	47	2.10	− 0.90	1.85	0	2	17	8	5	s.	E. J. Henson.
Pascagoula	Jackson	15	4	62.6	.....	78	21	35	11	32	2.84	.....	.....	0	2	...	...	...	.....	McVea Young.
Pearlington	Hancock	10	25	61.7	+ 2.5	78	16†	31	10	33	1.90	− 1.26	1.08	0	4	...	...	...	e.	Miss Annette Koch.
Porterville	Kemper		8	57.4	.....	81	23	23	11	36	3.30	.....	1.70	0	4	15	12	3	nw.	I. S. Rea.
Shubuta	Clarke	197	8	...	.....	...	...	...	...	...	3.66	.....	2.64	0	2	15	4	11	ne.	George A. Floyd.
Tupelo	Lee	278	14	55.6	.....	77	23	21	11	40	0.88	− 2.44	0.56	0	4	18	6	6	s.	W. S. Vincent.
Waynesboro	Wayne	191	26	57.2	+ 2.1	80	21†	26	10†	45	3.10	+ 0.24	2.30	0	2	10	8	12	n.	R. S. Burke.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 2, South Atlantic and East Gulf States.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Virginia.																																
Arvonia	James								.22	1.05						.09	.27	.28									T.	.02	.40	.01		2.34
Ashland	do									.52						.04											T.	T.	.56	.36	.07	1.55
Buchanan ‖	do	.17		.15						.33	.81		.38						.10	.12	1.17	.36			.29	.77						4.65
Callaville	Chowan									.32							.04	.72							.04			T.				1.12
Cape Henry	Coast									.50							.39	.06										T.	.06	T.		1.01
Catawba	Roanoke								.60	1.94						.13	.10											.03			.20	3.00
Charlottesville	James									2.17							.13	.41										.01	.66	.04	T.	3.42
Clarksburg ‖	Roanoke									1.41								.41														1.82
Columbia	James								1.10							.22	.57												.40			2.29
Danville ‖	Roanoke									3.45								.56											T.		T.	4.01
Diamond Springs	Coast									.61								.80											.05	.03	.02	1.51
Dry Bridge	James									.82							.23	.37										.02		.28		1.72
Hot Springs	do								.86	.24																		1.45				2.55
Ivor	Chowan									1.32								.62										T.	.12			2.06
Lassiter	James										.90						.53												.12			1.55
Lexington	do								1.09	1.74	T.					.25	.17											.30	.14	T.	.09	3.78
Lynchburg	do								1.71	1.16						.07	.20											.01	.03		.14	3.32
Newport News	Coast									.47							.12	.50										.08	.12	.03		1.32
Norfolk	do								T.	.56							.56	.04						T.				.08	.05	.01	T.	1.30
Petersburg	James									.72							.57											T.	.68	.03		2.00
Randolph ‖	Roanoke									.93								.48														1.41
Richmond	James								.01	.50					T.	T.	.60							T.			T.	.12	.26	T.	T.	1.49
Roanoke	Roanoke								.48	1.26						.05	.11	.09										.04			.06	2.09
Rocky Mount	do								.53	1.13							.10	.11														1.87
Ruckersville	James								.23	1.69						.02	.37	.01											.35			2.67
Runnymede (near)	Chowan									.51						T.	.80											.10	.08			1.49
Stuart	Roanoke								.84	.95							.23	.03													.14	2.19
West Point	Coast									.56							.41	.54							.02			.04	.39	T.		1.96
Williamsburg	James									.25							.10	.35														0.70
North Carolina.																																
Albemarle	Pedee								1.56	1.56							.02	.09													.01	3.24
Altapass (near)	Santee								.60	T.	T.						T.	.20													.45	1.25
Beaufort	Coast									.65	.02							.15														0.82
Belhaven	Pungo								.25	.80																						1.05
Brewers	Pedee								.67	.53							.06														.42	1.68
Caroleen	Santee							.70	.24								T.														.58	1.52
Chalybeate Springs	Cape Fear								T.	1.28							T.	.23														1.51
Chapel Hill	do								.02	1.87							T.	.47												.02	T.	2.38
Charlotte	Santee								2.79	.01	T.						.20													T.	.22	3.22
Chimney Rock	do								.70	T.								.80													.64	2.14
Durham (near)	Neuse									1.69								.39														2.08
Eagletown	Chowan								T.	.80								.72							T.					T.	.08	1.60
Edenton	Coast								.65									1.75														2.40
Elizabeth City	Pasquotank									.40								.95														1.35
Elizabethtown ‖	Cape Fear									1.45																						1.45
Elkin ‖	Pedee									1.35								.07														1.42
Enfield (near) ‖	Tar										.63							.52														1.15
Fayetteville ‖	Cape Fear									.92	.08							.12														1.12
Globe (near)	Santee								.67								.16														.42	1.25
Goldsboro ‖	Neuse									.75	.03							.38												.02	T.	1.18
Gorge (near)	Santee								.75	T.	T.																			.47	2.67	3.89
Graham ‖	Cape Fear									2.69								.52														3.21
Greensboro ‖	do									3.03																						3.03
Greenville ‖	Tar									.99	.04							.40												.02		1.45
Hatteras	Coast									.28							.05	.20														0.53
Henderson	Tar and Roanoke.								T.	.81							.64								.04				T.	.05	.05	1.59
Hickory	Santee								.88	.31							.02	.07													.49	1.77
Kings Mountain	do								1.10	.80							.03														.25	2.18
Kinston	Neuse									.73								.28														1.01
Lincolnton	Santee								1.72								.06														.28	2.06
Louisburg ‖	Tar									.70								.46												.03		1.19
Lumberton ‖	Lumber									.87								.09														1.06
Manteo	Coast									.60								.60														1.20
Marion	Santee								.96	.05	T.							.07													.19	1.27
Moncure ‖	Cape Fear									1.21	T.							.25														1.46
Monroe	do								1.84	.85			T.																			2.69
Morganton	Santee								.60	.30	T.						T.	.04													.37	1.31
Mount Holly ‖	Santee									2.60								.24													T.	2.84
Nashville ‖	Tar									.70								.34											T.		T.	1.04
Neuse ‖	Neuse									.86								.42														1.28
Newbern ‖	do									.81	.02							.38														1.21
N. Wilkesboro (near)	Pedee								.80	.60							.10														.30	1.80
Parkersburg	Cape Fear									.90								T.														0.90
Pinehurst	Lumber									1.10																						1.10
Raleigh	Neuse								.49	.55							.28												T.	.01	.06	1.39
Ramseur	Cape Fear								1.32	1.14	T.						.08	.14														2.68
Randleman ‖	do									3.35								.40														3.75
Reidsville ‖	do									3.15								.35														3.50
Rock House	Savannah								1.25	.03	.01						.02													.13	.68	2.12
Rocky Mount ‖	Tar									.40								.60														1.00
Rougemont ‖	Neuse									2.00								.50														2.50
Salisbury ‖	Pedee									1.96								.40														2.36
Saxon	Roanoke								1.05	1.53							.05	.35														2.98
Scotland Neck	Tar									.94								.48														1.42
Settle	Pedee								1.58	.67							T.	.12													.14	2.51
Sloan	Cape Fear									.32							.17															0.99
Smithfield ‖	Neuse									.85	.09							.21														1.15
Southern Pines	Cape Fear									.95																						0.95
Southport	do									.40							.06															0.46
Statesville	Pedee								1.38	.76																						2.14
Tarboro ‖	Tar									.63	.06							.30													.01	1.00
Weldon ‖	Roanoke									.66	T.							1.07							.02						T.	1.75
Willard	Cape Fear									.72								.10														0.82
Wilmington	do								.10	.53							.01	.01													T.	0.65
Winston-Salem ‖	Pedee									2.90																					.80	3.70

TABLE 2.—*Daily precipitation for November, 1913. District No. 2*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
South Carolina.																																
Aiken	Edisto								1.58	.35							.05														.05	2.03
Allendale	Savannah									.80																						0.80
Anderson	do								.76	.14																					.30	1.20
Batesburg	Edisto									2.67	T.							T.													T.	2.67
Beaufort	Coast								2.00												.25										T.	2.25
Blackville	Edisto									1.31								.06														1.37
Blairs	Broad									4.03																						4.03
Bowman	Edisto								1.60	.20														T.								1.80
Broxton	Salkehatchie									1.10																						1.10
Calhoun Falls	Savannah									1.61																					.26	1.87
Camden	Wateree									1.55	.04																					1.59
Catawba	Catawba									2.96																						2.96
Chappells	Saluda									3.00																						3.00
Charleston	Coast								1.19	T.																						1.19
Cheraw	Pedee									1.60	.18							T.														1.78
Clemson College	Savannah								.85								.04														T.	.89
Columbia	Congaree								1.83	.12							T.													T.	T.	1.95
Conway	Waccamaw									.95																						0.95
Darlington	Pedee									1.22	T.							T.														1.22
Dillon	Little Pedee									1.18							.05															1.23
Edgefield	Savannah									1.49								.09														1.58
Edisto	Edisto									1.50																						1.50
Effingham	Lynches									1.30	.01																					1.31
Ferguson	Santee									1.37								.01														1.38
Florence	Pedee									T.	.99																					0.99
Gaston Shoals	Broad									1.62								.01													.36	1.99
Georgetown	Coast								T.	1.15																						1.15
Greenville	Saluda									1.05								.03													1.50	2.50
Greenwood	do									2.00																						2.00
Heath Springs	Wateree								2.58																							2.58
Kingstree	Black									1.13																						1.13
Liberty	Savannah								.40	.70							.05													.02	.40	1.57
Little Mountain	Saluda								2.00	.35																				.05		2.40
Meriwether	Savannah									1.53							T.													T.	T.	1.53
Monetta	Edisto								1.33	.38																					.08	1.79
Newberry	Saluda								2.68	.06	T.						.03													T.	.08	2.85
Pelzer	do								.10	1.20																					.22	1.52
St. George	Edisto									1.40																						1.40
St. Matthews	Santee									1.70																						1.70
Saluda	Saluda								1.39	.35																						1.74
Santuck	Broad								2.00	.45							.01													T.	.20	2.66
Smiths Mills	Pedee									1.50								T.														1.50
Society Hill	do								1.60	.06							.05															1.71
Spartanburg	Broad								T.	.90								T.													.20	1.10
Summerville	Ashley								T.	1.85																						1.85
Trenton	Edisto								1.48								T.	.15													.04	1.67
Winnsboro	Broad								2.50																						.50	3.00
Winthrop College	Catawba								2.00	.59								.09														2.68
Yemassee	Combahee									1.11								.02														1.13
Georgia.																																
Abbeville	Ocmulgee								.73									T.						.16						T.	.04	0.93
Adairsville	Coosa								.50								.12													T.	.32	0.94
Albany	Flint									.27								T.														0.27
Allapaha	Allapaha									.95								.12						.10						.02		1.19
Americus	Flint									.70								.05													.10	0.85
Athens	Oconee								.10																						.22	0.32
Atlanta	Chattahoochee								.23	T.							.19							T.						T.	.12	0.54
Augusta	Savannah								1.90								.01							T.						.02	.02	1.95
Bainbridge	Flint									.20								.17														0.37
Butler	do								.96	.27								.13														1.36
Camak	Savannah									1.40								.05													.12	1.57
Canton	Coosa								1.10	T.	T.							.11						T.	T.						.22	1.43
Carlton	Savannah								.20	.18																					.20	0.58
Clayton	do								.80	T.							T.													T.	1.08	1.88
Columbus	Chattahoochee								.55	.05	T.							.08													.10	0.78
Concord	Flint								.27								.16														.01	0.44
Covington	Ocmulgee								.25		T.																				T.	0.25
Dahlonega	Chattahoochee								.85	T.							.04													.09	.36	1.34
Dublin	Oconee									1.40								.10						.07							.08	1.65
Eastman	Ocmulgee									.99														.13	T.					.15	.05	1.32
Eatonton	Oconee								.88								.11															0.99
Elberton	Savannah								.85		T.						.05													.05	.42	1.37
Experiment	Ocmulgee								.32	T.																						0.32
Fort Gaines	Chattahoochee																															0.00
Gainesville	do								.18									.05													.20	0.43
Gillsville	Savannah								.26		T.							.05														0.31
Glennville	Altamaha									1.07								T.													.02	T.	1.09
Gore	Coosa								.31	T.							.12	T.							T.					.01	.42	0.86
Granite Hill	Ogeechee								1.20																							1.20
Greensboro	Oconee									.93								.09													.18	1.20
Griffin	Ocmulgee								.27									.21														0.48
Hawkinsville	do									.60																						0.60
Highland Dam	Chattahoochee								.40	.20								.13													T.	.15	0.88
Jesup	Altamaha								1.25																							1.25
Lisbon	Savannah								1.40									.03													.01	.02	1.46
Lost Mountain	Chattahoochee								.27	T.							.10														.35	0.72
Louisville	Ogeechee								1.63								.14													.09		1.86
Lumber City	Ocmulgee									.90								.09					.02	.05						.05		1.11
Lumpkin	Chattahoochee								.16																						.10	0.26
Macon	Ocmulgee								1.04								.09													.01		1.14
Marshallville	Flint								1.21	.10								.07												T.		1.38
Milledgeville	Oconee								.02	1.18								.08						T.							.16	1.44
Millen	Ogeechee									1.50								T.														1.50
Mineral Bluff	Tennessee								.08							.03									.01					.01		0.13
Montezuma	Flint																	.02													.03	0.05

TABLE 2.—*Daily precipitation for November, 1913. District No. 2*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Georgia—Continued.																																
Monticello	Ocmulgee								.43	.20								.12													.08	0.83
Newnan	Chattahoochee								.21									.21													.09	0.51
Norcross	do								.10									.06													.06	0.22
Point Peter	Savannah								.60								.06															0.66
Poulan	Suwanee								.67																					.01		0.68
Putnam	Flint								.76																							0.76
Quitman	Suwanee									.52								.09														0.61
Ramhurst	Coosa								.52	T.							.18													.06	.21	0.97
Resaca	do								.56																						.47	1.03
Rome	do								.40	.05	T.							.12													.40	0.97
St. George	St. Marys			.03	T.				.85														.15						.14			1.17
Savannah	Savannah								1.80								T.															1.80
Statesboro	Ogeechee								1.42									.01					T.	T.						T.	T.	1.43
Talbotton	Chattahooch								.70									.13														.07	0.90
Tallapoosa	Tallapoosa								.15	.01	T.							.22														.30	0.68
Thomasville	Ocklocknee							T.	.36								.15						T.							T.	T.	0.51
Toccoa	Savannah								.23	.18	T.																				.32	0.73
Valdosta	Suwanee									.90																						0.90
Washington	Savannah								.19	1.25								T.													.16	1.60
Waycross	Satilla								2.21	1.22								.17	.01											.06		3.67
Waynesboro	Savannah									1.40								.03													T.	1.43
West Point	Chattahoochee								.15									.15												T.	.15	0.45
Woodbury	Flint								.15									.19														0.34
Florida.																																
Apalachicola	Coast								.33																						.12	0.45
Arcadia	Peace Creek				T.	.07			.79																							0.86
Archer	Waccasassa									.15													.01									0.16
Avon Park	Kissimmee								.32	.03													.06							.07		0.48
Bartow	Peace Creek								.11	.08													T.	.03						.11		0.33
Bassenger	Kissimmee								.36																				T.			0.36
Bradentown	Manatee								.49																							0.49
Bristol	Apalachicola								.58											.42													1.00
Brooksville (1)	Withlacoochee																						.15							T.		0.15
Brooksville (2)	do								.02	.65						T.							.04	.01					.01	.05		0.78
Carrabelle	Coast								.21																							0.21
Cedar Keys	do								.14														.24									0.38
Clermont	Lake								.20																							0.20
Crescent City	St. Johns	.01								.11														.12						.09		0.33
DeFuniak Springs	Choctawhatchee								.18									.04													.49	0.71
De Land	St. Johns		.07							.17													.11						.26			0.61
Eustis	Lake	.18						T.	.12															.11					.06			0.47
Federal Point	St. Johns				.02		.02															.04	.34	.01					.05	.10	.02	0.60
Fellsmere	Sebastian	.03		T.				T.	.44												T.	.05							.17			0.69
Fernandina	Coast									.30																		.07		.15		0.52
Fort Lauderdale	New	1.53	.01	.01			.09	.04	.02	.65						T.							.12		.37	.03			.03	.13	.05	3.08
Fort Meade	Peace Creek								.73														T.						.12			0.85
Fort Myers	Caloosahatchee				.06			1.05	.55	.19																						1.85
Fort Pierce	Indian		.04						.03	.29																						0.36
Gainesville	Lake									.24														.05								0.29
Garniers (near)	Coast								.31									.06													1.20	1.57
Grasmere	Lake								T.	.05													.02						.10			0.17
Griffin	New	.07	.04		.11		.10	1.41	.33	.24							.11			.06			.10	.10					.20	.21		3.08
Hilliard	Nassau									.68																						0.68
Homestead	Coast	.17	5.80	.24	.21	.36		.16	1.78	.06														.50								9.28
Hypoluxo	Lake	.04	.05		.35	.02			.43														.18					.09	.23	.19	.06	1.64
Inverness	Withlacoochee								.15																							0.15
Jacksonville	St. Johns						.01		.26													T.	.02						.03			0.32
Jasper	Suwanee								1.75																							1.75
Johnstown	do																													.52		0.52
Key West	Coast		.39	.66	T.		.05	.10	.02	T.							.03						T.			T.			.01	.10		1.36
Kissimmee	Kissimmee								.05	.05																			.20			0.30
Lake City	Suwanee									.75													T.								T.	0.75
Live Oak	do								.76																							0.76
Lock No. 1	North New River Canal	.10	.01	T.	T.	.10	T.	.56	.41					T.	T.	.16	T.		.05	T.	T.	T.	T.	.10	.04	T.	T.	T.	.32	.04	T.	1.89
Lucerne Park	Peace Creek								.24	.29													.09						.10	.12		0.84
Macclenny	St. Marys									2.00																						2.00
Madison	Suwanee									1.05								.03													.02	1.10
Malabar	Indian								1.00	.03													.11					.06	.66	.11		1.97
Marianna	Apalachicola								.05																							0.05
Merritts Island	Indian	T.						T.	.15	.02					T.													.09	.26	.10	.06	0.68
Miami	Coast	.07	1.02	.33	.74	.53	.19	.05	.60	.02					T.	.02		.09	.07	.05		.04	.36	.20	T.						.01	4.39
Middleburg	St. Johns						.08																.54									0.62
Molino	Escambia																														2.55	2.55
Newport	St. Marks								1.21																							1.21
New Smyrna	Coast									.15													.15		T.				.35	.48		1.13
Orange City	St. Johns	.18																							.61				.24		.04	1.07
Orlando	do							T.	T.	.17													T.						T.			0.17
Panama City	Coast								.41																						.20	0.61
Pensacola	do				T.			T.	.20																					1.08	.91	2.19
Pinellas Park	do								.72	.10																						0.82
Plant City	Hillsboro									.24																						0.24
Rockwell	Withlacoochee																						T.									T.
St. Augustine	Coast									.25													.15	.15						.20		0.75
St. Cloud	Kissimmee								T.	.11																		T.	T.			0.11
St. Leo	Withlacoochee								.01	.08													.04						T.	.10		0.23
Sand Key	Coast		.91	.02			T.	T.	.26	T.				T.			T.						T.	T.	.01	.04		.05	.01	.04		1.34
Sanford	St. Johns								.20													.05							.11			0.38
Satsuma Heights	do	T.					T.		T.	.15													.04						.06			0.25
Switzerland	do						.53		.38														.25									1.16
Tallahassee	Ocklocknee									.72								.09														0.81
Tampa	Coast							.06	.21											T.												0.27
Tarpon Springs	do								.21	.13													T.									0.34
Titusville	Indian	.01							.07	.07												.14	.04						.46		.01	0.80
Zona	New			.03	.09	.1		.47	.98	.15						T.	.05			.02	.01		.05	.16	.06	.01			.09	.24	.01	2.53

TABLE 2.—*Daily precipitation for November, 1913. District No. 2*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Alabama.																																
Alaga ‖	Chattahoochee									.46								T.													T.	0.46
Andalusia	Escambia							.20																					T.			0.20
Anniston	Coosa								.29								.22													.08	.36	0.95
Ashville	do								.26								.12													.05	.40	0.83
Auburn	Tallapoosa							.12	T.								T.	.07												.01	.30	0.50
Bay Minette ‖	Coast																													.45	1.08	1.53
Benton ‖	Alabama																	.08													.50	0.58
Bermuda	Escambia																T.													T.	1.03	1.03
Birmingham	Black Warrior						.08	T.	.24								.42						T.							.16	2.34	3.24
Calera ‖	Coosa								.25																					T.	.70	0.95
Camp Hill	Tallapoosa								.39								.12														.29	0.80
Citronelle	Alabama																													.54	1.52	2.06
Clanton ‖	Coosa									.02								.12													.50	0.64
Cochrane	Tombigbee								.15																					.20	1.79	2.14
Cordova	Black Warrior							.55									.35													.20	1.00	2.10
Cullman	do							.70									T.														.20	0.98
Dadeville ‖	Tallapoosa								.10									T.													.28	0.38
Daphne	Coast																													1.80	2.12	3.92
Demopolis ‖	Tombigbee								.02									.02													.20	1.75	1.99
Eufaula ‖	Chattahoochee								.26	.08														.01								.10	0.45
Evergreen ‖	Escambia																														1.10	1.10
Flomaton ‖	do																													T.	1.52	1.52
Fort Deposit	do								T.									T.													.60	0.60
Gadsden ‖	Coosa								.23									.10													.59	0.92
Goodwater ‖	do								.28									.19													.46	0.93
Greensboro ‖	Black Warrior							.24									.07													1.30	.15	1.76
Greenville ‖	Escambia																.24													1.84	....	2.08
Hamilton	Tombigbee							T.	.43																					.10	.38	0.91
Healing Springs ‖	do																T.													.36	2.21	2.57
Highland Home	Escambia							.33										T.													.75	1.08
Livingston ‖	Tombigbee								.07																					.38	1.99	2.44
Lock No. 4	Coosa								.20								.20													.10	.50	1.00
Maple Grove	do								.18	T.	T.							.08													.46	2.33	3.05
Mentone ‖	do								T.	.07	T.							.22														.70	0.99
Milstead ‖	Tallapoosa								.12									.10														.60	0.82
Mobile	Coast																							T.						3.46	.29	3.75
Montgomery	Alabama								T.								.04													.05	.78	0.87
Newbern	Black Warrior																.11													1.38	T.	1.49
Oneonta	do								.38	.04																				.38	.46	1.26
Opelika ‖	Tallapoosa								T.									.22														.28	0.50
Ozark ‖	Coast																														.25	0.25
Prattville	Alabama																T.													T.	.52	0.52
Pushmataha	Tombigbee																													1.07	1.66	2.73
Robertsdale	Coast																													1.03	1.55	2.58
Selma ‖	Alabama																	.06													T.	.43	0.49
Springhill ‖	Coast																													.02	2.97	2.99
Talladega	Coosa																.40													.41	.70	1.51
Tallassee ‖	Tallapoosa								.05	.02								.11														.44	0.62
Thomasville ‖	Tombigbee																													.29	1.22	1.51
Troy	Escambia								.13								.02													.01	.62	0.78
Tuscaloosa ‖	Black Warrior								.03									.16													.11	.70	1.00
Tuskegee	Tallapoosa								.07								.03														.67	0.77
Union Springs ‖	do								1.10									.05													.40	1.55
Uniontown	Black Warrior																													1.25	....	1.25
Valley Head	Coosa								.60	.10							.20													T.	.60	1.50
Wetumpka ‖	do																	.16													.45	0.61
Mississippi.																																
Aberdeen ‖	Tombigbee																	.33												.09	1.20	1.62
Agricultural College	do								.70								.10													.30	1.53	2.63
Bay St. Louis	Coast						T.	T.														.01						.12	.02	.81	1.14	2.10
Bay Springs	Leaf																													2.70	1.70	4.40
Biloxi	Coast																							T.			.03			.86	1.40	2.29
Booneville	Tombigbee								.10								.11													.13	.68	1.02
Brookhaven ‖	Pearl																													.65	1.22	1.87
Collins	Leaf																												T.	3.70	2.09	5.79
Columbia ‖	Pearl								.02														.02					T.		4.41	1.82	6.27
Columbus ‖	Tombigbee								.72									.21						T.						.04	1.08	2.05
Crystal Springs ‖	Pearl																													1.00	2.13	3.13
Edinburg	do							T.	T.								T.													.60	1.76	2.36
Enterprise ‖	Chickasawhay																													.85	2.94	3.79
Fulton	Tombigbee																.30													.20	.85	1.35
Hattiesburg ‖	Leaf																													2.04	1.58	3.62
Hazelhurst	Pearl																													1.23	1.67	2.90
Hickory ‖	Chickasawhay																													2.20	1.70	3.90
Jackson	Pearl						.14	.02														.02							.26	2.21	.52	3.17
Lake ‖	do																													1.18	1.76	2.94
Laurel	Leaf							T.										T.											T.	2.90	1.20	4.10
Leakesville ‖	Chickasawhay																													*	4.19	4.19
Louisville	Pearl																													.42	1.70	2.12
McNeill	do							.09																					T.	1.20	1.09	2.31
Macon ‖	Tombigbee								T.									.08														1.80	1.88
Magnolia	Pearl																					.01							1.57	2.30	.01	3.89
Meridian	Chickasawhay						T.	T.	T.								T.							T.						2.99	.42	3.41
Merrill ‖	Pascagoula																														.78	3.75	4.53
Monticello	Pearl						T.																							.20	1.03	2.20	3.43
Okolona ‖	Tombigbee																	.25														1.85	2.10
Pascagoula	Coast								T.																						*	2.84	2.84
Pearlington	Pearl							.22																					T.	.16	.44	1.08	1.90
Porterville	Tombigbee								.50								T.													.50	.60	1.70	3.30
Shubuta ‖	Chickasawhay																													1.02	2.64	3.66
Tupelo	Tombigbee							T.	.04								.20													.08	.56	0.88
Waynesboro ‖	Chickasawhay								T.																					.80	2.30	3.10

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 2, South Atlantic and East Gulf States.*

Date.	Virginia.										North Carolina.															
	Callaville.		Hot Springs.		Lynchburg.		Norfolk.		Richmond.		Charlotte.		Edenton.		Fayetteville.		Hatteras.		Newbern.		Raleigh.		Reidsville.		Salisbury.		Wilmington.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	53	23	58	48	54	27	51	38	52	34	52	31	55	31	56	30	53	44	65	35	52	32	50	29	56	31	54	35
2	61	24	62	52	59	30	54	39	58	30	63	32	60	32	65	27	61	46	66	30	62	33	56	30	61	25	62	34
3	65	25	60	52	67	29	63	45	64	32	66	40	62	31	69	30	62	48	70	37	64	32	65	33	65	25	68	40
4	73	39	60	47	73	44	71	46	71	46	72	45	66	34	79	40	67	50	77	39	72	47	70	41	71	36	73	45
5	62	33	58	28	63	32	52	44	58	37	61	43	75	36	60	41	58	53	65	46	59	44	59	40	73	38	62	46
6	67	25	60	38	66	27	60	42	62	31	64	38	65	35	67	34	63	53	72	41	64	38	60	33	73	37	68	40
7	70	29	64	35	67	30	61	46	64	33	67	40	68	48	70	38	65	55	73	42	68	39	65	35	71	40	69	44
8	69	37	59	37	56	37	67	54	62	47	59	47	67	44	74	37	64	56	74	50	67	39	63	41	70	32	71	45
9	58	40	40	30	49	33	61	38	58	35	47	32	59	42	65	38	68	44	52	48	59	34	50	36	68	30	66	37
10	43	32	30	29	38	30	45	34	44	30	42	28	47	36	47	30	48	40	52	32	42	30	39	30	47	29	46	32
11	43	24	29	20	39	24	43	30	41	25	43	24	46	27	46	25	46	38	50	30	41	27	39	22	45	21	45	30
12	52	19	42	17	55	23	49	30	51	27	55	28	47	24	57	26	50	37	57	26	54	25	51	23	48	23	52	30
13	66	40	48	40	73	37	70	37	74	38	72	38	65	36	73	34	63	42	77	32	72	36	69	37	72	22	70	38
14	77	49	55	43	71	54	74	51	74	51	73	48	70	45	77	41	68	49	82	41	75	49	72	45	76	42	74	48
15	60	43	58	48	61	43	54	46	54	40	68	50	75	43	67	46	58	52	68	47	62	50	64	48	77	50	62	49
16	68	40	54	42	54	43	67	48	64	41	67	46	70	43	71	49	66	50	71	45	67	48	59	44	74	42	74	55
17	57	36	60	46	61	39	48	41	54	37	61	45	62	41	66	40	61	46	61	44	56	45	56	40	65	40	61	45
18	66	30	60	38	72	36	64	38	67	35	66	41	58	33	69	34	56	44	73	34	66	39	64	38	68	34	65	36
19	78	43	51	38	80	49	75	47	77	50	70	46	64	44	74	41	65	50	79	40	74	49	74	47	67	34	72	45
20	80	47	58	35	80	51	74	53	80	52	73	46	72	45	77	45	67	52	80	44	74	51	76	42	76	34	72	51
21	78	42	67	45	78	46	76	56	76	52	70	45	72	41	78	42	67	54	84	43	76	49	75	47	76	35	74	49
22	75	37	68	51	77	41	74	53	74	44	72	50	70	40	70	44	68	51	84	42	74	52	71	45	74	38	78	48
23	77	37	64	46	78	44	76	52	77	46	77	50	74	50	80	50	69	56	85	47	76	53	73	47	77	40	77	53
24	66	41	65	43	59	46	58	45	59	42	64	45	65	48	69	50	62	49	69	54	64	45	67	45	76	41	66	48
25	56	25	50	32	57	31	52	42	53	34	58	38	61	35	60	32	52	42	64	36	56	33	54	34	70	38	56	39
26	59	30	56	34	66	37	60	41	59	37	63	41	60	36	69	40	60	45	71	34	64	40	63	8	64	35	66	43
27	54	47	42	48	51	46	54	50	54	45	62	45	61	40	66	39	59	48	65	39	58	46	55	45	67	32	70	49
28	51	44	48	45	47	41	58	51	46	41	53	43	61	46	53	44	58	51	56	44	50	46	49	44	64	45	63	46
29	58	45	49	42	58	45	55	48	53	46	59	43	56	41	59	46	54	51	59	50	52	47	56	43	61	41	64	49
30	55	44	48	43	47	43	51	47	51	44	54	47	54	47	59	46	59	52	65	50	50	47	53	44	60	38	58	48
Mns..	63.2	35.6	54.5	39.7	61.9	37.9	60.6	44.4	61.0	39.4	62.4	41.2	62.9	39.1	66.4	38.6	60.6	48.3	68.9	40.7	62.3	41.5	60.4	39.2	67.1	34.9	65.3	43.2

Date.	South Carolina.																Georgia.											
	Charleston.		Columbia.		Conway.§§		Ferguson.§§		Georgetown.		Greenville.§§		Newberry.		Society Hill.		Albany.§§		Atlanta.		Augusta.		Dahlonega.		Macon.		Rome.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	56	43	54	36	60	35	58	34	68	50	58	30	54	32	64	25	63	42	54	36	57	38	51	32	56	38	55	30
2....	59	46	63	30	64	30	64	35	66	50	57	27	64	27	71	30	69	41	61	40	64	32	62	28	62	33	60	30
3....	66	48	68	38	70	36	75	36	64	48	69	29	67	34	75	33	71	44	67	46	70	41	64	36	70	42	69	35
4....	71	51	75	38	74	38	76	36	65	50	75	33	72	35	65	44	73	48	68	52	75	39	71	35	73	39	70	38
5....	64	53	65	47	65	43	74	38	70	53	66	35	65	45	67	33	79	49	67	51	70	46	63	43	72	44	72	38
6....	65	48	65	42	69	38	73	40	64	48	68	35	65	38	72	36	78	54	65	44	68	45	63	43	69	49	69	40
7....	67	53	68	41	73	44	71	41	65	53	69	34	69	38	74	37	82	51	67	49	72	42	64	41	72	46	73	41
8....	73	54	68	50	74	40	77	41	59	50	55	35	60	48	45	38	74	55	59	38	65	48	59	49	64	43	64	51
9....	57	37	52	35	50	38	48	40	56	42	42	38	55	37	47	28	51	36	38	30	48	36	49	29	43	32	37	33
10....	49	35	46	32	46	31	49	31	50	30	42	27	45	29	47	25	57	30	41	28	47	32	38	25	49	30	46	28
11....	46	32	45	26	47	28	48	28	51	29	47	18	46	23	56	24	56	27	45	24	47	28	43	21	50	26	51	19
12....	53	36	57	28	56	27	50	25	60	26	60	19	59	25	72	31	66	31	63	36	60	29	62	24	60	27	66	19
13....	65	40	71	39	71	30	73	26	75	31	74	25	71	30	71	39	73	34	69	42	71	33	68	30	69	31	72	26
14....	72	49	75	48	74	36	76	33	84	43	76	33	74	40	73	42	78	41	69	50	73	38	68	35	73	37	69	30
15....	74	52	75	53	74	41	77	38	83	42	73	39	74	46	75	49	80	47	71	55	74	46	69	45	73	44	74	32
16....	74	58	73	55	73	51	72	44	73	57	71	44	72	50	64	45	78	52	69	54	75	54	62	49	74	50	69	43
17....	64	52	66	50	63	50	69	53	68	51	69	49	68	43	70	31	74	54	64	45	69	46	64	41	66	45	66	48
18....	64	45	70	41	69	34	70	34	71	36	71	33	70	33	74	35	76	41	67	48	70	38	66	36	70	39	68	34
19....	64	46	74	46	73	37	75	36	76	38	73	34	72	38	77	37	78	41	69	54	73	41	68	38	72	40	74	35
20....	73	50	75	48	74	40	75	39	76	42	76	37	75	38	77	38	78	45	71	56	75	41	71	40	74	40	74	35
21....	74	54	76	45	76	40	77	41	80	45	73	36	74	36	89	41	78	51	72	56	76	42	69	40	74	43	76	35
22....	70	58	78	50	80	44	78	43	80	47	75	36	76	43	80	51	79	53	73	59	74	50	71	45	71	48	75	42
23....	78	59	76	60	76	55	80	52	82	52	78	40	78	51	75	40	80	52	72	57	76	60	73	44	76	56	75	42
24....	72	54	70	51	71	51	74	50	75	57	69	46	70	48	70	30	76	53	66	46	73	47	67	38	73	46	64	45
25....	58	48	61	37	60	33	69	44	66	38	61	33	61	33	69	36	70	46	61	46	62	36	57	35	62	42	64	34
26....	69	47	68	36	68	33	70	33	75	33	67	36	66	29	69	35	74	43	67	45	69	34	65	30	70	35	68	30
27....	67	51	72	43	71	38	74	35	75	42	68	38	72	39	68	40	78	45	69	54	72	41	68	40	70	40	70	30
28....	69	54	65	46	70	43	72	41	74	44	60	43	59	43	61	38	78	47	66	48	71	47	62	47	72	50	67	38
29....	65	54	59	47	68	47	64	45	68	49	60	43	55	46	55	45	80	50	56	51	59	49	56	52	62	55	60	40
30....	62	57	58	53	65	50	74	51	65	43	52	45	56	53	54	48	79	52	56	50	61	55	54	48	66	58	60	54
Mns..	65.3	48.8	66.3	43.0	67.5	39.4	69.4	38.8	69.5	44.0	65.1	35.0	65.5	38.3	67.5	36.8	73.5	45.2	63.4	46.3	67.1	41.2	62.2	38.0	66.9	41.6	65.9	35.8

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 2*—Continued.

Date.	Georgia.								Florida.																	
	Savannah.		Thomasville.		Waycross.§§		West Point.§§		Avon Park.		Fort Myers.		Jacksonville.		Key West.		Marianna.§§		Miami.		Orange City.		Orlando.		Pensacola		Tallahassee.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	57	39	65	43	68	42	58	34	76	61	76	65	63	48	79	72	72	40	77	71	77	53	79	55	64	46	66	40
2....	63	41	71	45	70	41	64	32	78	67	78	67	71	51	74	71	78	45	75	70	77	56	79	61	68	50	71	45
3....	68	47	76	50	76	47	71	39	79	62	79	66	72	57	76	69	76	48	77	71	79	57	80	58	70	54	76	51
4....	74	49	74	48	76	49	71	38	80	62	77	65	74	60	80	72	80	54	78	72	81	53	82	59	72	57	74	54
5....	69	53	78	51	79	52	73	42	83	63	82	66	75	61	81	73	75	52	79	70	80	56	81	61	73	59	78	58
6....	69	49	75	59	76	56	71	45	79	62	80	66	73	64	83	74	76	54	80	73	80	63	82	62	71	63	74	60
7....	68	50	76	54	73	52	74	46	82	63	83	65	76	61	81	73	72	54	82	75	82	61	82	64	70	64	77	52
8....	76	54	75	49	80	56	66	51	75	56	77	68	78	54	83	72	55	40	78	71	81	61	83	64	70	48	74	55
9....	54	36	54	35	56	41	44	36	70	52	73	58	56	39	75	68	68	32	74	57	68	43	69	47	54	42	55	39
10....	50	33	57	33	54	32	52	27	65	45	63	46	55	36	70	57	60	28	61	48	67	39	64	35	56	38	56	31
11....	49	32	56	28	60	30	55	22	72	44	66	49	53	35	75	57	65	30	70	48	65	34	61	42	58	42	57	32
12....	56	37	64	30	68	38	65	25	69	43	70	45	61	37	71	59	76	40	70	50	72	29	71	35	62	46	64	38
13....	70	42	72	36	72	40	71	29	69	58	71	60	71	47	73	67	80	32	74	69	71	52	74	50	66	50	71	44
14....	74	53	77	43	78	41	73	33	72	58	77	61	75	55	76	68	80	45	77	70	84	58	79	57	70	54	76	52
15....	76	57	76	48	79	44	73	36	80	60	77	61	77	56	78	68	78	52	77	72	76	60	80	57	70	58	76	58
16....	74	60	77	53	79	51	75	43	80	56	80	60	78	61	76	67	75	54	78	61	78	49	84	57	73	60	76	54
17....	70	51	73	46	72	55	69	44	77	59	78	59	72	55	78	69	80	54	81	63	85	50	80	54	73	58	72	57
18....	69	43	73	42	73	41	71	34	76	61	76	59	70	50	77	68	79	40	75	61	88	43	79	51	71	54	71	46
19....	73	45	76	42	76	43	73	36	77	56	77	56	75	55	79	68	81	40	77	60	87	45	81	51	69	51	65	48
20....	76	53	77	49	76	45	75	37	79	51	80	59	76	51	80	70	84	46	77	69	86	50	82	52	69	57	78	50
21....	75	56	79	49	79	49	75	39	85	61	82	61	77	63	80	70	80	54	80	62	82	51	84	54	72	64	80	53
22....	75	63	77	54	73	59	78	44	81	59	83	63	75	66	80	71	80	60	77	70	79	58	79	61	72	58	77	58
23....	78	61	73	59	81	58	76	48	77	63	80	64	77	60	78	70	78	50	76	68	85	54	82	67	72	62	75	62
24....	76	59	78	50	78	54	70	52	76	62	81	67	80	59	79	70	79	46	76	67	89	61	82	62	77	59	80	57
25....	60	47	72	48	70	46	67	36	78	62	78	62	70	56	81	71	85	44	75	72	76	49	77	53	68	53	74	49
26....	72	51	76	45	77	43	71	31	77	57	79	60	74	55	79	71	80	45	76	71	79	49	79	54	67	55	75	48
27....	72	52	76	47	76	45	73	37	79	56	78	61	74	57	80	70	80	50	79	72	76	51	79	56	68	55	76	52
28....	71	58	77	53	72	48	75	42	77	62	80	63	73	64	80	70	72	70	79	72	73	62	81	61	68	60	76	55
29....	66	58	74	61	78	60	64	45	79	62	81	63	76	63	78	70	80	62	78	73	81	56	82	59	69	66	77	58
30....	64	59	74	61	80	54	69	57	78	61	82	60	75	66	80	73	84	60	78	68	76	60	84	61	70	60	72	61
Mns..	68.1	49.6	72.6	47.0	73.5	47.4	68.7	38.7	76.8	58.1	77.5	60.8	71.7	54.7	78.0	68.9	76.3	47.4	76.4	66.5	78.7	52.1	78.7	55.3	68.4	54.8	72.3	50.6

Date.	Tampa, Fla.		Alabama.														Mississippi.									
			Anniston.		Bermuda.		Birmingham.		Eufaula.§§		Mobile.		Montgomery.		Tuscaloosa.§§		Uniontown.		Bay St. Louis.		Columbus.§§		Jackson.		Laurel.		Meridian.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	76	57	59	30	63	37	59	32	57	34	64	43	59	37	60	33	66	35	66	44	63	31	64	35	65	35	58	36
2....	78	59	63	34	64	40	61	39	60	35	69	46	63	37	64	34	77	36	68	48	65	32	68	36	67	36	60	37
3....	80	61	70	44	75	42	71	48	62	36	74	51	71	45	74	34	81	44	73	53	76	40	80	38	67	39	73	43
4....	81	60	69	41	.....	.....	70	49	62	39	73	54	70	46	74	44	75	47	77	54	74	45	78	50	79	49	70	50
5....	82	63	73	41	77	43	75	44	71	40	74	52	75	47	78	42	78	46	76	53	77	43	76	47	75	45	72	46
6....	80	65	71	52	76	53	73	52	70	43	70	59	73	55	76	50	79	45	75	56	77	43	81	44	78	47	75	48
7....	83	66	74	55	77	57	75	58	72	49	72	63	77	55	76	55	82	48	76	64	73	52	80	62	77	57	73	58
8....	73	62	64	37	68	54	65	39	67	52	70	49	66	45	61	58	76	47	69	56	58	53	66	49	75	49	66	42
9....	63	49	40	27	54	38	42	33	.....	34	54	43	45	37	50	38	70	37	58	42	47	36	55	36	54	36	48	36
10....	60	40	47	24	57	27	49	29	.....	28	60	38	54	33	53	30	61	32	62	32	53	32	62	29	61	30	54	32
11....	58	45	51	21	61	26	53	26	.....	24	63	41	58	32	60	26	67	28	62	34	62	26	73	27	68	26	62	28
12....	68	40	67	28	71	30	69	41	.....	25	68	41	68	33	71	26	70	32	69	37	73	27	77	34	74	32	71	35
13....	72	52	72	34	73	32	73	47	70	27	70	43	72	39	73	35	72	40	71	45	75	36	80	42	77	36	73	44
14....	76	61	71	37	73	41	72	48	72	30	72	49	74	41	73	38	80	36	72	50	74	43	80	43	79	44	74	44
15....	77	65	73	45	75	44	74	54	74	36	75	51	74	48	75	41	80	44	73	54	77	47	79	50	80	48	74	51
16....	79	64	71	54	77	48	71	53	75	43	80	60	76	56	78	42	75	42	81	57	74	54	80	57	81	62	74	58
17....	78	58	66	40	.....	.....	65	45	67	50	73	58	71	50	74	48	80	40	76	55	69	48	77	58	75	54	66	43
18....	77	54	71	37	.....	.....	72	41	67	33	73	49	72	42	74	38	79	40	72	56	75	39	82	50	77	45	73	38
19....	76	57	74	40	.....	.....	73	52	68	35	71	46	76	44	75	38	76	40	74	49	75	39	82	50	77	40	74	40
20....	78	60	73	40	76	40	72	52	70	36	73	51	75	44	75	39	79	41	75	54	76	43	81	53	78	45	75	46
21....	82	62	76	47	81	49	76	55	71	39	76	62	77	50	78	41	80	49	77	64	73	48	82	56	80	45	77	59
22....	78	66	76	51	79	46	76	58	74	43	77	58	80	51	78	50	82	46	72	65	80	57	84	62	80	50	76	52
23....	81	61	75	51	81	50	76	58	75	50	75	61	78	61	82	50	81	44	76	65	82	52	85	52	83	50	78	49
24....	80	65	65	47	71	52	65	44	71	48	72	57	72	48	69	48	80	42	76	56	71	42	72	50	75	53	67	50
25....	77	60	65	35	74	37	68	43	65	34	71	46	70	41	72	38	80	39	73	49	69	37	77	34	73	34	70	39
26....	77	59	70	42	75	40	70	52	68	33	72	55	73	43	73	39	81	42	77	58	73	36	79	47	78	45	73	46
27....	77	59	71	42	74	44	72	53	70	35	70	54	74	47	74	39	79	43	72	61	75	46	78	52	75	54	71	49
28....	78	63	73	53	78	47	73	57	71	40	72	59	75	53	74	42	81	45	73	64	74	47	74	60	74	58	73	58
29....	80	63	59	56	66	61	64	60	69	45	69	64	65	60	74	45	80	52	71	66	64	56	68	60	70	61	68	60
30....	81	63	67	57	74	60	70	60	69	58	72	60	71	61	76	50	80	50	72	60	71	59	78	54	67	56	70	58
Mns..	76.2	58.6	67.2	41.4	71.9[d]	43.8[d]	68.1	47.4	68.7[d]	38.5	70.8	52.1	70.1	46.0	71.5	41.0	76.9	41.7	72.1	53.4	70.8	43.0	75.8	47.4	74.0	45.4	69.6	45.8

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 3, OHIO VALLEY.

PROF. FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

The month as a whole was remarkably warm for November throughout the entire district. There was some unusually cold weather, however, during the first 12 days, and especially in the period 9th–12th, when remarkably low temperatures for so early in the season were registered over the district, a temperature below zero being recorded at one station in West Virginia and temperatures considerably below freezing in practically all sections. Over the northern portion of the district the month was also unusually wet, while over the southern half it was decidedly dry, the deficiency in precipitation being marked from southern Kentucky southward to the southern border, and the excess large over much of Ohio and the upper basin of the Ohio River.

There was excessive cloudiness and deficient sunshine over nearly all of the district, and after the 12th a notable absence of wintry conditions which obtain so frequently during the latter half of November. The warm, moist weather was highly favorable for grass, and pastures by the end of the month had become green as in springtime. The weather was remarkably springlike over the northern part of the district, and as a result at the end of the month wild flowers had begun to bloom in Indiana and Illinois and dogwood and plum trees were reported to be in full bloom in Indiana, a condition almost unprecedented over these northern States at that time of year.

The most important feature of the month was the severe snowstorm which, attended by high winds, swept over the northeastern portion of the district from eastern Indiana and northern Kentucky to the crest of the Alleghanies and northward to the Lakes, on the 9th–10th. The storm was especially severe over Ohio and portions of West Virginia and western Pennsylvania. It was the most severe snowstorm for the time of year on record in Ohio, and ranks among the severest for any month in the past history of this region. Transportation lines and electric service were seriously impeded for several days, and mail service and lines of communication were interrupted. Two lives were lost near McGrawsville, Miami County, Ind., due to this storm.

The more important general storm formations passing over or affecting the weather conditions of the Ohio Valley during the month were: (1) A well-developed disturbance crossed the Rocky Mountain region on the 6th, and by the morning of the 7th, deepening as it advanced, occupied the central States west of the Mississippi River. With the center of lowest barometer over Minnesota, it extended in a rather deep trough to northern Texas. During the 7th and 8th the formation drifted slowly eastward, the path of the main center crossing the Lake region, and by 7 p. m. of the 8th was located north of Lake Erie. At the same time another storm center appeared off the Carolina coast, and by the morning of the 9th the two disturbances coalescing formed a storm of remarkable strength, centered about Chesapeake Bay, and thence moved northward to the lower Lakes during the 9th–10th and on down the St. Lawrence Valley. This storm was attended by destructive winds and remarkably heavy snowfall. (2) During the 13th–14th a shallow depression extended through the Ohio Valley attended by general rains, although the barometer readings were considerably above normal. This trough was broken into by a peak of higher pressure extending down from a high area over the Lakes in the afternoon of the 14th, but by the morning of the 15th another low formation had developed over the central Mississippi Valley, and overspreading the Ohio Valley during the 15th and morning of the 16th, caused a continuation of general rains over the district; and (3) a well-defined low-pressure formation which appeared in the Southwest the morning of the 29th moved slowly northeastward attended by general rain over the central valleys, and in the evening of the 30th was still centered over the central Mississippi Valley.

The following table summarizes the chief features of meteorological interest for the several sections of the district:

Portions of States included in the Ohio River Basin.	Temperature.				Precipitation.					
	Average.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest monthly.	Least monthly.	Greatest in 24 hours.	Average number of days.	Average snowfall
New York	42.8	+4.9	72	18	3.02	−0.30	3.93	2.30	1.83	13	1.1
Pennsylvania	43.1	+2.5	79	10	3.52	+0.71	6.34	2.07	2.21	13	10.3
Maryland	40.4	+2.1	72	10	4.18	+1.74	4.38	3.94	1.67	12	14.0
West Virginia	44.4	+2.0	82	−1	4.58	+2.00	8.83	0.61	2.50	10	14.6
Ohio	44.5	+3.5	78	2	3.77	+1.10	5.21	1.66	2.00	11	10.0
Indiana	48.0	+5.3	80	11	4.21	+0.94	8.12	2.05	2.40	12	0.8
Illinois	49.5	+6.0	80	12	4.49	+1.16	6.38	2.80	1.97	10	T.
Kentucky	50.5	+4.6	81	8	3.25	−0.20	6.12	0.83	2.20	9	0.9
Tennessee	51.7	+3.7	80	6	1.49	−2.00	2.58	0.37	2.04	4	0.4
Alabama	53.3	+2.5	81	16	1.34	−1.89	1.90	0.91	1.25	4	T.
Georgia	48.0	.....	75	17	0.13	.....	.....	.....	0.08	4	0
North Carolina	46.2	+1.3	76	12	1.67	−2.09	2.50	0.81	1.90	4	1.8
Virginia	44.9	+2.1	76	10	1.72	−0.89	2.70	1.13	1.50	4	2.1

TEMPERATURE.

The month opened cold, the cold weather which had so largely prevailed during the latter half of October continuing through the first two days of November when temperatures were from 5° to 12° or more below normal, with minimum temperatures generally below freezing and registering between 10° and 20° at stations in the northern portion of the district and in the mountain regions of the eastern and southern sections. A return to normal conditions occurred about the 3d and temperatures above normal largely prevailed on the 6th and 7th. Another cool wave, however, set in about the 8th and continued until the 11th, during which time the average daily temperatures were from 10° to 20° below normal and minimum temperatures for the various sections ranged generally below 20° and down as low as −1°. This cold

period was unusually severe for so early in the month, and while no minimum temperature records for November were broken, it is probable that record temperatures for the first half of November were equaled at many stations.

Unusually high temperature for November set in on the 12th and continued during the rest of the month, the warm weather being especially pronounced from the 19th to 22d and 27th to 30th. Maximum temperatures ranging from 70° to 82° were registered in all the sections durng the first of these periods, and these days rank among the warmest November days, especially in the northern portion of the district, for which there is a record. The warm, moist weather over the northern sections was beneficial to winter wheat but delayed the gathering of corn. At the close of the month some foliage that had been killed by the October frosts was growing again, and in some localities fruit trees were reported budding.

PRECIPITATION.

Precipitation was below normal over southern Kentucky, Tennessee, southwestern Virginia, western North Carolina, and the northern portions of Alabama and Georgia, where the amounts at the various stations were generally less than 3 inches and in the main ranged from 2 inches to less than 1 inch. It was above normal for November over northern Kentucky, over sections north of the Ohio, over West Virginia and a large portion of western Pennsylvania, where the amounts ranged generally from 3.5 to 8.5 inches. The large amount for the month over the northeastern portion of the district was mainly due to the heavy snow of the 9th–10th. In Tennessee while precipitation for the month was small in amount it was fairly well distributed over the State and, coming at favorable intervals, was beneficial.

Over Kentucky and the northern portions of the district, including West Virginia, there was much cloudy, gloomy, rainy weather after the first week. The more important periods of precipitation were the 7th–10th, 13th–16th, 23d, and 26th–30th. Precipitation was general over the entire district on the 8th, 9th, 10th, 16th, and 30th.

Snowfall was unusually light in Illinois and over the western portions of Indiana, Kentucky, and Tennessee, but was unusually heavy for November over the northeastern portion of the district, due to the severe snowstorm of the 9th–10th which swept over those sections. The snowfall of this storm was remarkably heavy, measuring from 3 to 36 inches over portions of Ohio, West Virginia, and southwestern Pennsylvania, and being attended by high winds ranks among the most severe snowstorms that have ever occurred over those sections. The following are extracts from reports of section directors in those States:

An unprecedentedly heavy snowfall occurred on the 9th and 10th in the Ohio Basin. This snowfall was generally heaviest from Pittsburgh southward, and traffic of all kinds suffered severely in those districts. In some instances trains were delayed for 24 hours or more and the passengers visited near by farm houses to secure provisions. Many telephone, telegraph, and electric-light wires were blown down and large sections of towns and cities were temporarily isolated and in darkness, and interurban trolleys were put out of commission on many lines. These conditions seemed to be worst in the Beaver Valley, where the winds were apparently highest.—Geo. S. Bliss, Section Director, Philadelphia, Pa.

By far the greatest snowstorm of record for the season occurred on the 9th–10th. West of the crest of the mountains the falls ranged generally from nearly 1 foot to more than 3 feet. The fall at Parkersburg was 15.9 inches. The total of the November falls for the previous 25 years for Parkersburg is but 23.8 inches.—H. C. Howe, Section Director, Parkersburg, W. Va.

The snowfall of the month was much above normal in all but a few of the western counties, and it practically all occurred on the 9th and 10th. The snowstorm on the 9th and 10th was by far the heaviest for the time of year on record in Ohio, and likewise it was one of the heaviest on record for any month of the year. The fall was heaviest in the Muskingum Valley, where it ranged from 10 to 25 inches, and it gradually decreased toward the southwest. At Cincinnati it was only 0.8 inch.

The storm was preceded on the 8th by a steady fall in temperature and brisk northwest winds. The snow began to fall early on the morning of the 9th and continued steadily throughout the day and following night. High west and northwest winds prevailed throughout the 9th and 10th which piled the snow into high drifts in the streets, roads, and railroad cuts. Traffic was badly interrupted on nearly all roads in the State and in some localities in eastern Ohio it was completely stopped for a day or more.

Rural mail carriers were unable to make their trips for several days, and the inability of milkmen to deliver milk to their customers caused much inconvenience. In some instances cars loaded with live stock were snowbound and the stock was compelled to suffer in open cars. On many farms stock, especially sheep, were caught out in the fields and suffered severely before they could be gotten to shelter.—J. Warren Smith, Section Director, Columbus, Ohio.

A severe wind and snow storm began on Saturday night, November 8, and continued through Sunday and the early part of Monday. Considerable snow fell at points in the northern part of the State, but elsewhere the amounts were heavy in only a few localities. Railroad traffic was much delayed in the northern part of the State, and the storm, together with the cold weather, caused considerable suffering among the poorer classes. The snow remained on the ground but two or three days.—V. H. Church, Section Director, Indianapolis, Ind.

MISCELLANEOUS.

Thunderstorms occurred in Tennessee on the 1st, 2d, and 3d; in Illinois on the 7th; in Kentucky, Tennessee, and Indiana on the 7th and 8th; in West Virginia on the 12th; in Ohio, Indiana, and Illinois on the 13th; in West Virginia, Ohio, Indiana, and Illinois on the 14th; in Illinois and Indiana on the 22d and 28th; and in Tennessee, Kentucky, Illinois, and Indiana on the 30th.

Fog was notably prevalent at frequent intervals during the month, but especially from the 27th to the 30th, inclusive, in West Virginia, Ohio, and the portions of the other States bordering on the Ohio River. At many places the fog and smoke were so dense that navigation on the Ohio had to be suspended. The cooperative observer at Madison, Ind., states:

On the 27th and 28th fog and smoke enveloped this section the entire day, obscuring all traces of the sun, and becoming so dark that it was difficult to see objects but a short distance away. Navigation on the Ohio was stopped, artificial lights were necessary in the houses and in the streets during all of the two days. In its impenetrability and length of duration the fog surpassed any in the memory of the oldest inhabitant.

RIVERS.

The rise in temperature which followed so soon after the heavy snowfall of the 9th–10th, rapidly melting the snow, together with the copious rains of the 14th–16th, caused flood stages in the upper tributaries of the Ohio River and at a few points in the upper reaches of the main stream, but no serious damage was caused by the floods.

The Tennessee and Cumberland Rivers were at low stages throughout the month; also the Wabash system of rivers and the larger rivers of Kentucky were at low or moderate stages during the month.

TABLE 1.—*Climatological data for November, 1913. District No. 3, Ohio Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York.																				
Allegany	Cattaraugus	1,441	7	43.5	.....	72	21	21	6	47	3.93	.....	1.83	3.2	20	5	6	19	nw.	C. E. Whitney.
Bolivar	Allegany	1,800	19	42.0	+ 4.9	68	21	18	6	48	2.30	− 0.30	0.92	T.	8	4	6	20	w.	C. F. Hoffman.
Olean	Cattaraugus	1,402	5	.....	.....	.....	.....	.....	.....	.....	2.82	.....	0.78	T.	12	.....	.....	.....	.....	John W. Alles.
Pennsylvania.																				
Aleppo	Greene	1,135	12	43.4	+ 2.3	71	21†	11	12	43	2.07	+ 0.18	1.00	18.0	7	14	3	13	sw.	J. S. Hinerman.
Baldwin	Butler	1,404	7	41.2[a]	.....	69[a]	21	18	11	38[a]	2.60	.....	0.60	9.0	10	10[a]	3[a]	16[a]	w.	S. H. Templeton.
Beaver Dam	Beaver	674	19	.....	.....	.....	.....	.....	.....	.....	2.73	+ 0.03	1.39	.....	13	5	1	24	sw.	U. S. Engineer.
Brookville	Jefferson	1,173	22	44.1	.....	76	21	18	9	46	3.00	− 0.22	0.56	.....	16	.....	.....	.....	w.	H. C. Bartholomew.
California	Washington	770	10	43.2	+ 0.4	73	20	17	12	41	3.65	+ 2.11	2.21	13.0	9	12	4	14	sw.	W. T. Fiske.
Clarion	Clarion	1,078	28	.....	.....	.....	.....	.....	.....	.....	3.58	+ 0.84	0.82	8.0	15	9	3	18	w.	N. A. Goble.
Claysville	Washington	1,127	9	43.6	.....	71	21	13	12	44	3.63	.....	1.80	18.0	10	13	5	12	w.	E. T. Buchanan.
Confluence	Somerset	1,352	29	.....	.....	.....	.....	.....	.....	.....	4.38	+ 1.21	1.29	.....	13	8	8	14	.....	Grant Pyle.
Franklin	Venango	955	38	42.0	+ 2.5	72	21	22	15†	43	3.42	+ 0.21	0.92	2.0	18	8	2	20	sw.	F. E. Dixon.
Freeport	Armstrong	772	40	.....	.....	.....	.....	.....	.....	.....	2.96	− 0.17	0.72	7.5	14	3	4	23	.....	Mrs. Anna R. Burtner.
Greensboro	Greene	768	24	.....	.....	.....	.....	.....	.....	.....	4.86	+ 2.01	1.40	16.5	12	10	4	16	se.	James G. Cramer.
Greensburg	Westmoreland	1,100	6	43.8	.....	74	21	16	12	41	3.30	.....	1.22	11.0	15	9	7	14	sw.	Westmoreland Water Co.
Greenville	Mercer	950	17	42.2	+ 3.8	72	22	16	12	45	3.69	+ 0.88	1.30	14.2	17	16	4	10	sw.	A. M. Orr.
Indiana	Indiana	1,350	16	42.6	+ 1.7	79	21	16	12	38	2.92	+ 0.14	1.55	6.5	10	7	7	16	sw.	W. W. Wehrle.
Johnstown	Cambria	1,184	25	44.0	+ 2.4	73	19	23	12†	46	3.86	+ 0.66	1.68	4.1	16	7	8	15	nw.	E. C. Lorentz.
Lock No. 4	Washington	718	27	.....	.....	.....	.....	.....	.....	.....	2.98	+ 0.45	0.91	6.5	14	6	3	21	sw.	R. T. McGowan.
Lycippus	Westmoreland	1,420	21	43.3	+ 1.5	72	21	19	11†	28	4.42	+ 2.01	1.83	18.0	12	.....	.....	.....	.....	Murray Forbes.
Mosgrove	Armstrong	775	2	.....	.....	.....	.....	.....	.....	.....	2.65	.....	0.87	2.0	16	8	0	22	sw.	C. J. Moore.
Pittsburgh	Allegany	842	43	45.1	+ 2.2	72	21	21	10	34	2.66	+ 0.11	1.62	14.7	11	6	6	18	sw.	U. S. Weather Bureau.
Punxsutawney	Jefferson	.....	0	42.0[d]	.....	76	21	20[e]	12†	52[e]	3.44	.....	1.60	3.0	8	6	7	17	ne.	Samuel M. Rosenthal.
Ridgway	Elk	.....	0	43.7	.....	73	21	20	6	48	4.15	.....	.....	.....	13	12	0	18	.....	F. J. Eagen.
Saegerstown	Crawford	1,116	22	42.4	+ 4.1	71	21	18	12	44	3.59	+ 0.04	0.70	12.0	13	4	7	19	sw.	J. G. Apple.
Sharon	Mercer	940	2	43.1	.....	71	21	19	12	40	2.75	.....	1.03	8.5	15	1	2	27	sw.	Norman S. Powell.
Skidmore	Lawrence	1,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Stoner.
Somerset	Somerset	2,250	57	40.8	+ 2.2	72	21	10	11	46	4.14	+ 0.70	1.15	12.0	11	4	12	14	nw.	W. M. Schrock.
Uniontown	Fayette	999	25	46.6	+ 3.4	78	21	17	12	45	6.34	+ 2.02	1.80	17.0	11	12	2	16	nw.	Wm. Hunt.
Warren	Warren	1,137	24	41.9	+ 3.1	73	20	20	6	45	3.79	+ 0.31	1.00	4.4	12	10	0	20	sw.	Anna Simpson.
Maryland.																				
Deer Park	Garrett	2,457	20	39.4	+ 1.4	70	21	10	12	43	3.94	+ 1.46	1.01	14.0	9	.....	.....	.....	.....	S. P. Specht.
Grantsville	do	2,351	20	41.2	+ 1.6	72	21	17	11†	48	4.38	+ 1.82	1.67	13.0	11	10	5	15	w.	J. S. Miller.
Oakland	do	2,461	14	40.4	+ 3.4	72	21	12	12	54	4.21	+ 1.94	0.95	15.0	15	11	5	14	w.	R. E. Weber.
West Virginia.																				
Bancroft	Putnam	574	10	44.9	− 0.2	77	6	17	12	48	4.07	+ 1.77	1.30	7.0	11	10	1	19	ne.	R. E. Dent.
Beckley	Raleigh	2,440	14	44.8	+ 2.4	78	13	5	11	48	4.70	+ 2.30	1.30	32.0	7	17	2	11	w.	John A. Ewart.
Bens Run	Pleasants	622	12	44.4	+ 1.6	72	7†	9	12	40	4.16	+ 1.72	0.80	19.0	12	16	4	10	.....	J. D. Riggs.
Bluefield	Mercer	2,558	19	48.9[c]	+ 4.8	75	22[c]	18	12[c]	40	0.61	− 2.00	0.20	3.5	6	17[b]	2[b]	9[b]	.....	Norfolk & Western Ry.
Buckhannon	Upshur	1,411	23	43.4	+ 2.3	70	7†	4	12	55	7.35	+ 4.00	2.00	29.0	11	13	1	16	.....	H. A. Darnall.
Cairo	Ritchie	674	11	45.1	+ 1.7	73	20†	5	12	44	4.81	+ 2.35	1.60	14.0	12	2	14	14	w.	Van A. Zevely.
Central Station	Doddridge	950	11	.....	.....	81	.....	5	12	.....	4.61	+ 2.16	.....	18.0	.....	.....	.....	.....	.....	G. W. Sherwood.
Charleston	Kanawha	597	28	51.0	+ 3.0	75	20†	23	11	37	5.18	+ 2.05	1.10	9.0	12	15	2	13	w.	R. C. Hewes.
Creston	Wirt	701	12	47.6	+ 4.8	82	19	10	12	48	4.94	+ 2.72	1.50	9.0	11	12	3	15	sw.	J. M. Reed.
Cuba	Jackson	650	13	45.2	+ 2.1	75	22	10	12	45	5.23	+ 3.24	1.14	12.0	10	8	13	9	w.	C. T. Perry.
Doane	Wayne	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. A. Smith.
Elkhorn	McDowell	1,933	21	49.0	+ 3.4	71	19†	20	11†	35	2.99	+ 0.32	1.42	10.0	5	12	10	8	w.	J. J. Lincoln.
Elkins	Randolph	1,940	14	43.0	+ 3.4	73	22	6	12	48	5.47	+ 2.61	1.85	20.5	14	10	5	15	w.	U. S. Weather Bureau.
Fairmont	Marion	883	21	42.6	.....	76	7	10	12	50	5.38	+ 2.68	1.86	17.5	14	16	2	12	w.	F. P. Hall.
Glenville	Gilmer	738	24	45.2	+ 1.9	78	7	7	12	50	5.60	+ 1.97	2.12	16.0	6	13	1	16	w.	Joe N. Craddock.
Grafton	Taylor	1,000	21	44.8	+ 2.0	76	6	9	12	52	6.26	+ 3.35	2.50	13.7	11	15	2	13	w.	Joseph Gerken.
Green Sulphur Springs	Summers	1,600	18	44.2	+ 1.7	74	22	12	12	44	2.97	+ 0.88	1.10	5.0	8	10	8	12	w.	Arthur George.
Hinton	do	1,450	24	44.6	+ 0.1	73	19†	18	12	50	2.59	+ 0.37	1.22	3.0	8	14	2	14	w.	J. B. Lavender, C. E.
Holcomb	Nicholas	.....	1	40.9[a]	.....	73[a]	21	10	12	43[a]	5.42	.....	.....	24.0	9	14	1	15	.....	R. E. Ferguson.
Huntington	Cabell	538	18	46.4	+ 3.0	74	22	20	11	40	4.26	+ 1.56	1.28	4.0	10	11	2	17	.....	L. H. Hutchinson.
Lewisburg	Greenbrier	2,200	13	43.5	+ 2.3	71	21	10	12	43	3.29	+ 0.78	1.26	5.0	6	18	2	10	sw.	Geo. T. Argabrite.
Logan	Logan	687	11	50.7	+ 3.4	73	7	26	2†	35	3.12	+ 0.37	0.72	4.0	11	15	3	12	w.	Dr. J. E. McDonald.
Lost Creek	Harrison	1,026	17	42.1	+ 1.6	74	7	− 1	12	51	5.15	+ 2.80	1.75	14.5	8	12	3	15	w.	Allen Smith.
Madison	Boone	704	8	42.6[f]	.....	76[f]	7†	10[f]	11	57[h]	4.39	.....	0.86	10.0	12	9[f]	5[f]	10[f]	.....	S. E. Bradley.
Mannington	Marion	974	11	43.2	+ 2.8	73	19†	1	12	49	5.28	+ 3.14	1.57	22.2	15	14	3	13	w.	Jas. A. Morgan.
Marlinton	Pocahontas	2,131	17	38.6	+ 0.3	64	19†	8	12	44	3.05	+ 0.26	0.75	3.0	7	16	6	8	.....	C. J. McCarty.
Morgantown	Monongalia	1,250	39	45.8	+ 2.6	79	19	21	11†	38	2.51	− 0.43	0.97	.....	11	7	11	12	nw.	Prof. Edgar L. Andrews.
Moundsville	Marshall	642	11	44.8	+ 2.0	73	19†	11	12	47	3.55	+ 2.41	0.92	15.9	13	11	5	14	sw.	M. L. Brown.
New Cumberland	Hancock	987	14	43.8	+ 2.8	72	21	16	12	41	2.72	+ 1.02	1.20	14.0	11	7	6	17	s.	Frank S. Evans.
New Martinsville	Wetzel	634	20	46.4	+ 2.1	74	7	10	12	42	4.51	+ 1.95	1.60	18.0	11	16	5	9	s.	Wm. Ankrom.
Nuttallburg [i]	Fayette	2,252	21	40.6	.....	65	19	15	11†	32	4.51	+ 2.04	.....	23.0	7	11[b]	5[b]	6[b]	.....	Miss Donna Tully.
Parkersburg	Wood	638	25	46.5	+ 3.3	74	22	16	12	38	4.62	+ 1.79	1.65	15.9	11	10	5	15	s.	U. S. Weather Bureau.
Parsons	Tucker	1,656	14	41.5	+ 0.3	74	21†	4	12	50	7.50	+ 5.32	.....	25.0	10	12	5	13	.....	J. W. Swisher.
Philippi	Barbour	1,149	21	43.8	+ 0.7	75	22	5	12	49	5.38	+ 2.48	1.52	15.6	13	14	2	14	w.	J. D. Dadisman.
Pickens	Randolph	2,697	23	42.6	+ 2.1	73	6†	9	12	42	8.83	+ 5.19	2.30	36.0	10	15	1	14	w.	Dr. J. L. Cunningham.
Point Pleasant	Mason	553	23	47.0	+ 2.1	77	22	17	11†	46	4.40	+ 1.61	1.30	10.0	12	12	0	18	se.	W. D. Holmes.
Powellton [a]	Fayette	933	16	46.8	+ 2.6	77	7	15	12	44	4.68	+ 2.20	1.20	14.0	11	15	5	9	.....	Morris Hansford.
Princeton	Mercer	2,395	13	41.8	+ 1.9	65	19	10	12	37	1.90	− 1.80	0.80	10.0	4	13	9	8	w.	H. Scott.
Robertsburg	Putnam	574	13	45.0	+ 2.8	77	22	13	11	44	4.05	+ 1.81	1.40	7.5	10	10	2	18	.....	E. P. Turley.
Ryan	Roane	700	10	45.2	+ 2.2	76	28	10	12	50	4.70	+ 2.59	1.26	8.6	11	17	1	12	.....	Wm. E. Ryan.
Smithfield	Wetzel	835	9	40.3	.....	75	22	5	12	52	7.44	+ 4.67	2.30	31.0	15	10	2	18	nw.	G. M. Whisler.
Spencer	Roane	784	15	46.6	.....	82	21†	10	12	54	6.22	+ 4.13	1.83	19.5	9	11	6	13	.....	A. M. McKown.
Sutton	Braxton	839	10	.....	.....	.....	.....	.....	.....	.....	5.29	+ 2.66	.....	.....	12	13[e]	3[e]	11[e]	.....	Ben Gillespie.
Terra Alta	Preston	2,612	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Wm. R. Shaw.
Union	Monroe	2,250	9	42.6	+ 2.7	69	19	11	12	43	1.91	− 0.17	0.80	3.5	5	.....	.....	.....	.....	Shelton Clark.
Valley Fork	Clay	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Blanche Pierson.
Wellsburg	Brooke	1,225	19	43.0	+ 2.1	67	19†	14	12	30	3.17	+ 1.16	1.20	20.0	11	7	9	14	sw.	C. P. Waugh.
Weston	Lewis	1,026	25	41.4	− 1.9	72	21	6	12	46	6.22	+ 2.92	2.00	14.0	12	11	7	12	sw.	Miss C. M. Davis.
Wheeling	Ohio	645	29	43.8	.....	73	19†	15	12	41	3.77	+ 1.30	1.53	16.3	15	10	4	16	s.	Miss M. B. Forsyth.
Williamson	Mingo	660	12	46.0	+ 0.7	73	22	21	11†	44	2.60	− 0.19	0.76	3.0	9	14	2	14	w.	J.F. Keyser.

TABLE 1.—*Climatological data for November, 1913. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio.																				
Amesville	Athens	630	9	43.5	.....	75	22	5	12	50	4.10	.....	0.92	11.0	9	10	8	12	nw.	F. W. Gibson.
Ashland	Ashland	1,079	13	43.8	+ 4.6	73	22	14	12	43	2.56	− 0.78	1.00	18.0	6	6	2	22	w.	S. W. Brandt.
Bangor ville	Richland	1,380	26	43.2	+ 3.8	71	22	13	12	34	2.73	− 0.32	0.80	14.0	12	8	7	15	sw.	S. M. Painter.
Bellefontaine	Logan	1,276	34	43.5	+ 2.8	72	22	18	1†	32	3.75	+ 0.78	1.11	8.0	12	11	2	17	s.	Cory L. Lane.
Beverly	Washington	637	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	0	22	ne.	Mrs. Ella M. Wilson.
Bladensburg	Knox	1,100	20	42.4	+ 3.8	73	21	3	12	46	3.53	+ 1.39	0.87	12.0	14	10	9	11	sw.	Miss Mary Elliott.
Brilliant	Jefferson	700	.....	41.6	.....	66	20	12	12	30	2.65	.....	1.80	20.0	5	3	7	20	w.	Mrs. Mary K. Pennell.
Cadiz	Harrison	1,245	9	42.6	.....	70	21†	12	12	34	5.21	.....	2.00	20.0	9	9	6	15	.....	Harry B. McConnell.
Cambridge	Guernsey	803	21	43.4	+ 2.7	71	20†	2	12	46	4.87	+ 2.70	1.80	24.0	10	5	13	12	.....	Samuel Mehaffey.
Camp Dennison	Hamilton	570	20	47.6	+ 4.7	75	22	18	11	39	4.09	+ 1.45	0.71	1.0	13	10	8	12	s.	Henry F. Pinkvoss.
Canal Dover	Tuscarawas	884	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Francis L. Bixler.
Canton	Stark	1,089	30	42.8	+ 2.7	71	22	18	12	39	2.90	+ 0.43	1.00	12.0	14	14	4	12	sw.	Carl H. Meyer.
Cardington	Morrow	1,010	18	44.0	+ 4.8	76	22	18	12	36	.....	.....	.....	9.0	.....	10	1	19	s.	J. W. Shaw.
Chillicothe	Ross	630	10	.....	.....	.....	.....	.....	.....	.....	3.72	.....	0.95	6.0	11	.....	.....	.....	.....	Marion Mackey.
Cincinnati	Hamilton	628	42	49.6	+ 5.0	76	22	22	11	36	4.26	+ 1.05	1.33	0.8	14	9	3	18	se.	U. S. Weather Bureau.
Circleville	Pickaway	694	25	46.2	+ 3.8	77	22	19	12	45	4.69	+ 2.20	1.30	5.0	13	14	4	12	s.	Dr. H. R. Clarke.
Clarington	Monroe	600	10	44.2	+ 2.3	72	7	11	12	43	4.27	+ 2.47	1.25	2.6	13	13	4	13	sw.	Col. S. Tschappat.
Columbiana	Columbiana	1,114	.....	42.4	.....	70	21	16	12	39	2.62	.....	1.66	20.5	7	12	5	13	s.	C. E. Wolfgang.
Columbus	Franklin	918	35	45.8	+ 4.4	73	22	20	12	33	4.56	+ 1.45	1.16	7.5	15	8	4	18	sw.	U. S. Weather Bureau.
Coshocton	Coshocton	770	4	.....	.....	.....	.....	.....	.....	.....	4.17	.....	1.70	.....	13	.....	.....	.....	.....	Mrs. Ada Jeffries.
Dayton (1)	Montgomery	899	2	46.8	+ 4.5	72	22	20	11	32	3.98	+ 1.09	1.02	3.2	13	10	4	16	s.	U. S. Weather Bureau.
Dayton (2)	do	790	32	46.3	+ 4.2	74	20†	20	1†	39	4.60	+ 1.75	1.03	3.0	12	.....	.....	.....	.....	Mrs. Edith E. L. Boyer.
Delaware	Delaware	896	16	44.0	+ 3.6	74	22	15	12	43	2.06	− 0.35	0.53	5.0	13	11	7	12	sw.	De Witt H. Leas.
Demos	Belmont	1,325	25	43.9[d]	+ 2.6	78	7	17[e]	12	39[e]	3.45	+ 1.02	1.30	16.0	13	12	5	13	sw.	J. T. Dysart.
Dennison	Tuscarawas	846	3	43.3	.....	71	22	7	12	45	3.10	.....	0.97	15.0	11	11	7	12	s.	Water Supply Co.
Frankfort	Ross	745	21	48.2	+ 5.5	77	22	19	11†	47	4.39	+ 2.01	0.75	8.0	11	11	2	17	s.	O. A. Cory.
Gallipolis	Gallia	580	1	.....	.....	.....	.....	.....	.....	.....	3.58	.....	1.45	11.5	10	.....	.....	.....	.....	Samuel F. Neal.
Garrettsville	Portage	1,005	29	41.6	+ 3.0	71	22	8	12	45	3.26	+ 0.24	1.31	20.1	14	7	7	16	sw.	S. M. Luther.
Granville	Licking	960	31	44.1	+ 4.0	75	22	12	12	42	2.93	− 0.24	0.62	5.5	12	9	2	19	sw.	Dr. L. E. Davis.
Green	Adams	500	20	48.8	+ 4.6	76	22	12	11	41	3.86	+ 1.07	1.40	3.0	8	13	6	11	n.	W. F. Kenyon.
Green Hill	Columbiana	1,135	20	40.4	+ 1.8	68	22	11	12	41	1.94	− 0.21	0.72	10.5	11	8	9	13	sw.	Jos. E. Bentley.
Greenville	Darke	1,060	27	46.4	+ 5.9	73	22	21	10	35	3.54	+ 0.31	0.70	4.0	14	9	7	14	s.	Geo. A. Katzenberger.
Hamilton	Butler	601	1	47.2	.....	73	20†	18	11	44	2.69	.....	0.97	.....	10	11	7	12	.....	Earl W. Stout.
Haydenville	Hocking	700	1	41.8[e]	.....	74[e]	19†	9[e]	12†	51[e]	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. W. Stiers.
Hillsboro	Highland	1,063	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Carey H. Roush.
Ironton	Lawrence	575	30	47.4	+ 3.3	76	20†	19	11	44	3.52	+ 0.86	1.17	3.6	12	11	7	12	sw.	James Bull.
Kenton	Hardin	1,015	21	43.8	+ 3.6	74	22	18	12	38	.....	.....	.....	.....	.....	13	5	12	s.	Frank B. Rarey.
Killbuck	Holmes	1,087	20	43.0	+ 2.7	72	22	11	12	42	4.88	+ 2.41	1.40	21.2	13	18	4	8	e.	John A. Schonauer.
Kings Mills	Warren	640	1	.....	.....	.....	.....	.....	.....	.....	4.03	.....	0.94	2.0	12	14	1	15	sw.	Frank M. See.
Lancaster	Fairfield	898	18	45.0	+ 2.6	73	22	16	12	37	4.08	+ 1.50	0.78	8.0	12	12	2	16	sw.	R. L. Renshaw.
McConnelsville	Morgan	710	29	43.8	+ 1.8	72	20	9	12	43	4.67	+ 1.83	1.12	13.2	13	7	8	15	s.	C. H. Morris.
Marietta	Washington	627	93	45.7	+ 3.0	74	22	13[a]	12	35[a]	4.19	+ 1.20	1.09	12.0	11	9	5	16	s.	Prof. T. D. Biscoe.
Marion	Marion	980	35	45.4	+ 4.8	74	22	19	12	39	2.74	+ 0.15	0.81	13.0	10	7	6	17	sw.	Dr. E. H. Raffensperger.
Milfordton	Knox	1,200	21	43.4	+ 4.4	71	22	18	2	39	3.57	+ 1.30	1.06	8.0	8	9	7	14	sw.	L. H. Burgess.
Milligan	Perry	875	20	43.9	+ 2.9	74	22	4	12	51	4.07	+ 1.83	1.55	12.0	8	7	13	10	sw.	V. C. Eveland.
Millport	Columbiana	1,145	20	40.8	+ 1.5	69	21†	7	12	46	3.34	+ 0.98	1.90	15.0	8	6	10	14	s.	G. F. Copeland.
Nellie	Coshocton	850	13	40.4	+ 0.8	72	22	2	12	44	3.30	+ 0.87	1.30	25.0	10	12	6	12	w.	Ethel L. Gammertsfelder.
O. S. University	Franklin	757	30	45.0	+ 4.3	73	22	19	12	40	4.60	+ 2.03	1.11	8.3	14	10	2	18	s.	Prof. H. C. Lord.
Oregonia	Warren	690	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. H. Stephens.
Pataskala	Licking	1,015	21	44.0	+ 3.5	73	22	10	12	37	4.42	+ 1.64	1.12	6.7	15	8	11	11	sw.	J. N. Ridenour.
Peebles	Adams	645	2	46.1	.....	76	22	13	11	48	5.03	.....	1.25	2.0	14	14	4	12	nw.	Ora O. Smalley.
Philo	Muskingum	1,018	18	45.2	+ 2.2	71	22	17	12	34	4.46	+ 2.26	1.36	13.7	11	8	9	13	se.	L. C. Burckholter.
Piqua	Miami	847	3	.....	.....	.....	.....	.....	.....	.....	2.86	.....	0.85	3.5	9	.....	.....	.....	.....	Harry L. Roberts.
Plattsburg	Clark	1,130	20	44.4	+ 3.4	72	20†	19	11	39	3.77	+ 1.10	1.35	5.0	8	9	8	13	sw.	F. E. Stewart.
Portsmouth	Scioto	527	82	48.5	+ 3.8	78	22	18	11	43	4.61	+ 1.65	1.64	2.0	9	8	3	19	sw.	Dr. H. A. Schirrmann.
Prospect	Marion	909	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Neil J. Gast.
Sidney	Shelby	985	30	45.6	+ 5.1	73	22	21	3	39	3.06	− 0.19	0.72	5.6	13	8	5	17	sw.	Hamline B. Blake.
Somerset	Perry	1,080	14	44.9	+ 2.6	71	22	12	9	34	4.52	+ 2.23	1.00	10.0	11	11	7	12	s.	Miss M. W. C. Sheridan.
Springfield	Clark	980	19	.....	.....	.....	.....	.....	.....	.....	4.10	+ 1.42	0.92	.....	13	9	10	11	s.	W. A. Webster.
Summerfield	Noble	1,187	7	43.6	.....	71	19	9	12	45	4.42	.....	1.35	23.0	12	10	6	14	sw.	H. R. McClintock.
Syracuse	Meigs	583	2	45.8	.....	77	22	15	12	42	5.12	.....	1.20	12.0	10	13	3	14	.....	Irving R. Karr.
Thurman	Gallia	696	20	47.6	+ 3.0	78	22	15	11	33	4.41	+ 2.05	1.35	4.0	7	10	6	14	.....	D. D. Thomas.
Toboso	Licking	789	.....	41.9	.....	74[a]	23	12	12†	46[a]	3.82	.....	1.10	6.0	6	4	12	14	sw.	H. A. Albyn.
Urbana	Champaign	1,031	45	44.8	+ 4.5	73	20	19	1†	39	2.49	− 0.42	0.42	6.5	12	8	11	11	sw.	Prof. J. H. Williams.
Warren	Trumbull	900	24	42.6	+ 2.8	70	21	19	12	44	3.58	+ 1.05	1.55	18.7	14	9	8	13	sw.	M. D. McCorkle.
Waverly	Pike	590	30	46.4	+ 3.4	76	22	16	12	46	3.73	+ 0.99	0.75	3.0	13	10	1	19	s.	Dr. Peru Hutt.
Waynesville	Warren	700	28	46.0	+ 4.4	74	22	15	11	36	4.76	+ 1.61	1.32	2.0	11	10	7	13	sw.	Charles Michener.
Wooster	Wayne	1,030	34	42.4	+ 2.6	73	22	12	12	40	3.77	+ 1.07	1.00	18.0	12	8	4	18	sw.	Experiment Station.
Youngstown	Mahoning	846	20	.....	.....	.....	.....	.....	.....	.....	1.66	− 1.06	0.42	9.0	9	8	5	17	sw.	J. M. Dickey.
Zanesville	Muskingum	700	26	.....	.....	.....	.....	.....	.....	.....	4.02	+ 1.72	0.98	11.0	10	11	0	19	sw.	S. G. Sprague.
Indiana.																				
Anderson	Madison	892	18	46.9	+ 4.6	72	22	16	11	36	2.38	− 0.62	0.53	2.5	10	10	5	15	s.	W. H. Stanton.
Bloomington	Monroe	744	18	46.4	+ 2.1	75	22	17	11†	48	4.02	+ 0.71	0.83	0.4	12	10	3	17	sw.	Earl E. Ramsey.
Bluffton	Wells	835	18	47.2	+ 7.3	78	21	21	1	33	2.05	− 0.84	0.68	0.1	8	12	6	12	.....	George R. Rinehart.
Butlerville	Jennings	767	28	48.9	+ 5.6	76	22	15	11	39	4.58	+ 0.88	1.12	1.5	12	12	5	13	.....	C. F. Hole.
Cambridge City	Wayne	941	22	44.4	+ 4.2	75	22	16	11	46	4.32	+ 1.42	0.92	0.0	12	12	0	18	n.	Heze Barnett.
Columbus	Bartholomew	632	30	48.4	+ 6.0	76	22	22	11	37	3.68	+ 0.40	0.80	0.0	11	11	5	14	.....	R. D. Perry.
Connersville	Fayette	769	31	46.8	+ 5.5	73	20	17	11	42	3.58	+ 0.24	0.90	0.5	8	8	6	16	sw.	H. T. Swindler.
Crawfordsville	Montgomery	780	3	47.8	.....	74	20	14	11	36	3.90	.....	0.85	T.	7	9	1	20	sw.	P. H. Burns.
Delphi	Carroll	668	28	45.4	+ 6.2	74	22	16	11	44	2.97	− 0.21	0.56	T.	11	13	0	17	.....	L. A. Higginbotham.
Evansville	Vanderburg	386	37	52.0	+ 6.7	75	20	26	11	32	4.87	+ 0.76	1.48	0.2	14	6	11	13	s.	U. S. Weather Bureau.
Farmersburg	Sullivan	.....	15	49.4[a]	+ 5.4	76	22	17[b]	11	37[b]	5.08	+ 2.84	0.99	.....	11	5	13	12	s.	Miss Carrie Yeager.
Farmland	Randolph	1,101	31	45.2	+ 4.6	71	22	20	11	37	2.40	− 0.70	0.53	0.0	13	9	1	20	s.	Ralph E. Lyst.
Forest Reserve	Clark	478	.....	49.0	.....	76	22	15	11	46	5.20	.....	1.24	.....	13	11	6	13	.....	Ambrose Waltman.
Greenfield	Hancock	905	10	47.2	.....	73	22	17	11	35	5.41	.....	1.20	0.5	11	0	9	21	s.	Frank Larrabee.
Greensburg	Decatur	954	17	48.3	+ 4.3	73	20	19	11	34	4.55	+ 1.52	1.00	0.5	10	11	7	12	sw.	C. C. Morrison, M. D.
Hickory Hill	Brown	.....	.....	49.6	.....	76	22	16	11	34	4.29	.....	0.87	T.	11	11	1	18	.....	Benjamin W. Douglass.
Huntingburg	Dubois	462	5	51.7	.....	77	22	20	1	41	8.12	.....	2.02	.....	10	.....	.....	.....	.....	H. Dufendach.
Huntington	Huntington	741	20	45.5	+ 5.5	72	22	19	11	38	2.73	− 0.51	0.55	1.0	10	9	4	17	nw.	Chas. McGrew.
Indianapolis	Marion	822	41	47.6	+ 6.0	73	22	20	11	34	6.20	+ 2.68	1.90	1.2	15	7	3	20	sw.	U. S. Weather Bureau.
Jeffersonville	Clark	455	31	50.6	+ 5.1	76	22	23	11	38	4.36	+ 0.45	1.32	T.	13	12	5	13	s.	John C. Loomis.
Judyville	Warren	450	6	46.6	.....	72	22	11	11	36	3.29	.....	0.61	.....	12	8	5	17	s.	W. A. Hill.
Kokomo	Howard	840	21	45.7	+ 4.9	71	21	15	11	33	2.56	− 0.40	0.55	3.0	11	8	7	15	sw.	P. H. Robertson.
Lafayette	Tippecanoe	617	34	45.3	+ 5.6	70	21†	16	11	43	3.88	+ 0.83	0.70	T.	13	9	5	16	s.	Wm. J. Jones, jr.

TABLE 1.—*Climatological data for November, 1913. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Indiana—Continued.																				
Logansport	Cass	620	33	45.8	+ 5.4	73	21†	15	11	40	2.81	− 0.34	0.55	3.5	12	11	0	19	e.	Chas. Massena.
Madison	Jefferson	460	21	49.4	+ 5.3	75	22	17	11	40	4.66	+ 1.47	1.12	2.0	14	9	6	15	sw.	Miss F. Cooperider.
Marengo	Crawford	363	31	52.9	+ 8.0	77	23	21	11	37	5.42	+ 0.72	2.40	T.	7	4	10	16	w.	J. M. Johnson.
Marion	Grant	814	27	45.8	+ 5.6	71	21	17	11	34	2.59	− 0.54	0.53	1.0	13	9	5	16	sw.	James F. Hood.
Mauzy	Rush	980	33	45.6	+ 5.8	74	22	13	11	41	4.49	+ 0.98	1.05	1.5	11	8	5	17	sw.	Elwood Kirkwood.
Monticello	White	674	3	.....	.....	.....	.....	.....	.....	.....	2.99	.....	0.44	0.5	10	9	5	16	sw.	J. E. Loughry.
Moores Hill	Dearborn	980	12	48.1	+ 4.7	73	22	16	11	38	4.40	+ 2.14	0.90	2.5	13	13	1	16	sw.	W. S. Bigney.
Mount Vernon	Posey	410	27	49.2	+ 3.6	80	22	23	11	45	4.22	+ 0.29	1.20	T.	10	14	1	15	s.	Guy B. Green.
Nashville	Brown	.....	.....	47.4	.....	76	22	12	11	38	4.29	.....	1.12	1.0	12	7	8	15	sw.	W. C. Goble.
Paoli	Orange	611	16	49.4	+ 4.9	78	21	13	11	42	5.47	+ 2.43	1.88	T.	11	10	7	13	sw.	James A. Gillum.
Princeton	Gibson	481	31	51.8	+ 7.9	77	22	19	12	36	4.60	+ 1.09	0.89	0.0	12	13	2	15	sw.	Albert Mills.
Richmond	Wayne	972	28	45.8	+ 5.0	74	22	14	11	39	4.13	+ 1.04	0.85	1.9	14	7	6	17	.....	Walter Vossler.
Rochester	Fulton	775	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dean L. Barnhart.
Rockville	Parke	722	27	48.4	+ 6.4	74	20	15	11	35	5.10	+ 1.66	1.25	T.	13	7	6	17	s.	C. A. Lee.
Rome	Perry	370	10	51.6	+ 4.6	79	20	18	11	43	5.64	+ 2.08	1.44	T.	13	12	5	13	sw.	Adam Anspach.
Salamonia	Jay	950	8	45.1	.....	71	20†	18	1	37	3.23	.....	0.57	6.0	16	5	8	17	sw.	S. A. Armstrong.
Salem	Washington	717	20	49.6	+ 5.0	77	22	16	10	47	5.02	+ 1.68	1.75	T.	10	5	13	12	sw.	Emmet S. Allen.
Scottsburg	Scott	570	19	48.8	+ 3.9	77	22	17	11	41	4.58	+ 1.53	1.04	T.	10	9	8	13	s.	Frank H. Park.
Seymour	Jackson	610	26	49.7	+ 6.2	78	20†	15	11	43	4.07	+ 0.59	1.15	T.	12	8	9	13	sw.	J. Thomas Hays.
Shelbyville	Shelby	768	9	47.3	.....	75	22	18	11	38	4.74	.....	0.76	2.0	13	6	13	11	sw.	Edgar G. Hodson.
Shoals	Martin	523	6	47.2	.....	75	22	15	11†	36	3.79	.....	1.12	1.5	10	11	0	19	se.	Inez M. Rowe.
Terre Haute	Vigo	498	23	49.0	+ 4.6	74	20	20	11	32	6.51	+ 3.30	1.65	T.	13	4	8	18	s.	U. S. Weather Bureau.
Veedersburg	Fountain	612	14	47.6	+ 5.4	72	20†	13	11	37	3.17	+ 1.02	1.02	T.	12	11	6	13	s.	L. A. Culver, jr.
Vevay	Switzerland	525	32	50.0	+ 4.9	75	20†	18	11	40	4.50	+ 1.14	1.25	2.0	9	9	9	12	sw.	Miss Frederica Boerner.
Vincennes	Knox	431	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Garrett V. List.
Washington	Daviess	484	17	49.8	+ 4.0	75	22	18	11	34	5.73	+ 2.59	1.46	T.	11	7	4	19	nw.	Charles C. Feagans.
Whitestown	Boone	529	5	44.0	.....	70	20†	16	11	30	3.54	.....	0.93	1.4	15	7	14	9	s.	Clyde O. Laughner.
Winona Lake	Kosciusko	865	6	45.7[a]	.....	71[a]	21	18	11	35[a]	2.35	.....	0.49	0.8	13	7	9	14	sw.	Rev. Albert A. Young.
Worthington	Greene	526	31	49.4	+ 6.4	75	22	16	11	37	4.16	+ 0.46	1.03	T.	9	6	11	13	sw.	D. W. Solliday.
Illinois.																				
Albion	Edwards	531	22	51.0	+ 7.0	75	20	20	11	37	5.00	+ 1.55	1.14	T.	11	14	5	11	sw.	B. F. Michels.
Casey	Clark	645	10	.....	.....	.....	.....	.....	.....	.....	6.32	+ 2.65	1.40	T.	10	11	7	12	se.	William Chenoweth.
Charleston	Coles	720	28	47.0	+ 4.7	75	20	15	11	34	3.89	+ 0.67	1.57	T.	8	13	4	13	se.	State Normal University.
Danville	Vermilion	604	12	48.2	+ 7.6	72	21	15	11	38	4.86	+ 1.61	0.96	T.	12	10	3	17	sw.	J. J. Lemon.
Equality	Gallatin	415	15	53.4	+ 5.4	79	20†	22	11	40	3.93	+ 0.80	0.70	T.	8	13	7	10	s.	Dr. L. W. Gordon.
Fairfield	Wayne	450	20	51.4[a]	+ 6.0	78[a]	22	17[a]	11	39[b]	4.40	+ 1.20	1.25	T.	10	15	2	13	sw.	George A. Tromly.
Flora	Clay	495	27	50.8	+ 7.9	76	22	20	11	39	4.67	+ 1.33	1.56	T.	11	9	8	13	sw.	W. L. Hanna.
Golconda	Pope	500	35	53.5	+ 6.7	80	22	18	10	42	4.77	+ 0.63	1.36	0	9	10	7	13	sw.	Dr. D. Lawrence.
Hoopeston	Vermilion	715	11	47.2	+ 5.7	72	21†	14	11	34	3.31	+ 0.62	0.68	T.	13	12	5	13	.....	S. F. Hoskinson.
McLeansboro	Hamilton	462	30	51.4	+ 6.4	78	20	19	11	43	2.80	− 0.61	0.60	T.	9	.....	.....	.....	.....	Thos. W. Biggerstaff
Metropolis	Massac	346	2	.....	.....	.....	.....	.....	.....	.....	3.64	.....	0.83	0	10	11	8	11	s.	Henry H. Humma.
Montrose	Effingham	599	3	48.5	.....	77	22	15	11	39	6.38	.....	1.97	T.	10	6	12	12	sw.	J. C. Spitler.
Mount Carmel	Wabash	424	12	49.1	+ 5.1	77	22	21	11	46	4.60	+ 0.91	1.19	0.3	12	.....	.....	.....	.....	Mrs. H. M. Phillips.
New Burnside	Johnson	613	18	51.8	+ 4.5	78	22	16	1†	41	4.19	+ 0.90	1.00	0	11	14	3	13	sw.	Thomas H. McCabe.
Newton	Jasper	484	2	.....	.....	.....	.....	.....	.....	.....	5.93	.....	1.67	T.	10	13	8	9	.....	J. M. Hicks.
Olney	Richland	486	26	47.8	+ 3.7	75	22	16	11	49	4.89	+ 1.42	1.90	T.	8	11	10	9	sw.	John T. Ratcliffe.
Palestine	Crawford	500	31	49.2	+ 6.2	76	22	18[a]	11	37[a]	5.35	+ 1.61	1.53	T.	11	9	6	15	s.	Duane Shaw.
Paris	Edgar	600	20	47.4	+ 5.2	75	20	16	11	44	4.03	+ 0.84	1.37	T.	9	.....	.....	.....	.....	H. P. Twyman.
Philo	Champaign	700	29	46.8	+ 7.1	71	21†	12	11	35	4.08	+ 1.00	1.21	T.	11	9	14	7	sw.	H. A. Burr.
Rileyville	Saline	400	16	.....	.....	.....	.....	.....	.....	.....	3.76	+ 1.14	0.81	0	9	8	5	17	s.	W. H. Thornberry.
Shawneetown	Gallatin	307	3	.....	.....	.....	.....	.....	.....	.....	4.42	.....	1.48	0	9	.....	.....	.....	.....	Mrs. Mary O. Spivey
Sidell	Vermilion	680	0	.....	.....	.....	.....	.....	.....	.....	3.84	.....	.....	T.	.....	11	3	16	s.	H. J. Sconce.
Tuscola	Douglas	644	20	.....	.....	.....	.....	.....	.....	.....	4.29	+ 1.71	1.23	T.	11	11	7	12	sw.	Joseph O'Neal.
Urbana	Champaign	751	11	47.5	+ 6.2	72	21	16	11	34	4.49	+ 2.14	1.06	T.	11	5	10	15	sw.	University of Illinois.
Kentucky.																				
Alpha	Clinton	.....	19	55.4	+ 5.9	77	20†	18	11	37	2.08	− 1.65	0.70	3.0	4	18	5	7	w.	W. W. Hicks.
Anchorage	Jefferson	700	12	50.4	+ 6.3	79	20	16	11	43	4.53	+ 1.60	0.95	0.5	10	14	2	14	sw.	C. E. Barret.
Bardstown	Nelson	637	16	50.8	+ 4.2	77	20	17	11	50	4.76	+ 1.38	1.90	0.2	12	13	4	13	s.	T. S. Talbott.
Beattyville	Lee	650	9	47.2	+ 3.5	81	22	13	2†	52	2.54	− 0.43	0.60	0.7	11	10	9	11	w.	G. W. Cann.
Beaver Dam	Ohio	441	10	52.4	+ 7.3	78	20	21	1	41	2.34	− 0.78	0.63	0	6	13	7	10	s.	W. T. Austin.
Berea	Madison	1,070	12	52.2	+ 5.5	76	20	20	1	43	2.97	+ 0.17	0.75	3.5	10	14	5	11	nw.	C. F. Rumold.
Blandville	Ballard	445	32	54.4	+ 7.8	77	22	23	11	35	2.49	− 1.97	0.67	T.	10	11	6	13	se.	E. W. Horr.
Bowling Green	Warren	500	24	50.3	+ 3.4	77	22†	18	10	43	1.32	− 2.74	0.90	0	5	17	4	9	s.	Mrs. L. G. Causey.
Burnside	Pulaski	773	22	.....	.....	.....	.....	.....	.....	.....	1.46	− 2.21	0.58	0.7	9	.....	.....	.....	.....	K. W. Massey.
Calhoun	McLean	397	10	54.0	+ 6.6	78	20	20	11	40	4.31	+ 1.11	1.09	T.	13	8	9	13	s.	W. A. Taylor.
Catlettsburg	Boyd	544	24	.....	.....	.....	.....	.....	.....	.....	4.28	+ 1.14	1.28	6.0	11	.....	.....	.....	.....	Mrs. Mertie M. Bruns.
Earlington	Hopkins	370	23	53.4	+ 5.7	78	20†	19	11	47	1.96	− 2.42	0.75	T.	7	14	0	16	s.	Brick Southworth.
Edmonton	Metcalfe	600	22	51.6	+ 4.8	75	20	15	11	43	2.29	− 1.61	0.99	1.0	7	13	6	11	s.	Miss Lee Ray.
Eubank	Pulaski	1,177	19	46.8[b]	+ 2.1	74[b]	20	11[b]	11†	55[c]	1.26	− 1.77	0.43	0.4	5	11	5	14	s.	Mrs. Katie Payne.
Falmouth	Pendleton	530	24	.....	.....	.....	.....	.....	.....	.....	5.10	+ 1.48	1.57	3.0	10	11	2	17	s.	J. V. Oldham.
Farmers	Rowan	668	6	47.8	.....	78	20†	8	11	52	3.35	.....	0.65	0	10	20	1	9	w.	Lee Craycraft.
Frankfort	Franklin	560	22	49.6	+ 3.4	72	20†	19	11	39	4.97	+ 1.56	1.71	0.2	11	10	7	13	s.	Mary J. Roberts.
Franklin	Simpson	691	19	53.6	+ 5.1	76	15	19	11	40	0.83	− 2.70	0.50	T.	3	5	19	6	s.	J. E. Newman.
Greensburg	Green	581	21	50.0	+ 5.3	77	20	15	11	48	3.18	− 0.50	1.50	0.2	10	5	4	21	sw.	Mrs. Bettie K. H. Alcorn.
Hazard	Perry	.....	0	.....	.....	.....	.....	.....	.....	.....	3.15	.....	1.10	2.5	10	.....	.....	.....	.....	Kelly E. Watts.
High Bridge	Jessamine	762	10	.....	.....	.....	.....	.....	.....	.....	2.83	− 0.15	0.77	0.5	10	.....	.....	.....	.....	Miss Lulu Wood.
Hopkinsville	Christian	524	17	53.2	+ 5.1	79	20	17	11	40	1.92	− 2.56	0.60	0	6	13	2	15	e.	W. F. Randle.
Irvington	Breckinridge	.....	15	51.2	+ 5.1	76	21†	19	11	35	4.65	+ 1.25	1.20	T.	8	11	3	16	sw.	W. J. Piggott.
Jackson	Breathitt	.....	0	.....	.....	.....	.....	.....	.....	.....	1.84	.....	0.68	T.	7	.....	.....	.....	.....	T. J. Turner.
Leitchfield	Grayson	635	17	50.6	+ 4.0	75	20	17	11	40	4.00	− 0.43	1.11	T.	7	12	3	15	s.	J. E. Stone.
Lexington	Fayette	989	25	49.4	+ 4.7	72	22	19	11	34	4.00	+ 0.52	1.26	2.2	10	10	4	16	s.	U. S. Weather Bureau.
Loretto	Marion	681	16	51.0	+ 4.8	74	20†	15	1†	43	3.81	+ 0.69	0.80	T.	10	13	4	13	.....	Loretto Academy.
Louisa	Lawrence	.....	0	.....	.....	.....	.....	.....	.....	.....	4.55	.....	1.50	3.0	9	.....	.....	.....	.....	Lucien S. Johnson.
Louisville (1)	Jefferson	525	41	51.4	+ 5.1	74	22	23	11	34	4.32	+ 0.14	1.39	T.	13	6	9	15	s.	U. S. Weather Bureau.
Louisville (2)	....do	.....	3	51.1	.....	75	22	20	11	36	4.40	.....	1.50	0.5	11	14	0	16	s.	W. I. Hunt.
Manchester	Clay	.....	3	.....	.....	.....	.....	.....	.....	.....	1.68	.....	0.66	0	7	.....	.....	.....	.....	Mrs. George P. Hatton.
Marion	Crittenden	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. C. Paris.
Maysville	Mason	524	16	47.1	+ 2.8	80	22	17	11†	49	4.44	+ 1.46	1.97	4.1	10	14	1	15	sw.	Mrs. Mary D. Marsh.
Middlesboro	Bell	1,128	18	48.4	+ 2.5	73	22	15	11	45	1.84	− 1.83	0.64	T.	5	17	8	5	.....	B. H. Perkins.
Mt. Sterling	Montgomery	930	23	47.2	+ 2.9	73	19	12	12	48	4.15	+ 0.70	2.19	0.2	9	15	2	13	s.	James O'Connell.
Owensboro	Daviess	479	16	50.4	+ 2.7	78	20	21	11	34	6.12	+ 2.71	2.20	T.	9	10	7	13	s.	Henry S. Berry.
Paducah	McCracken	341	24	.....	.....	.....	.....	.....	.....	.....	2.22	− 2.12	0.80	0	6	.....	.....	.....	.....	S. A. Fowler.
Pikeville	Pike	.....	5	.....	.....	.....	.....	.....	.....	.....	1.66	.....	0.40	2.0	8	.....	.....	.....	.....	I. M. William

TABLE 1.—*Climatological data for November, 1913. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Kentucky*—Continued.**																				
Richmond	Madison	926	21	51.4	+ 4.6	75	20†	20	11	37	2.90	+ 0.21	0.76	0	10	14	2	14	.....	J. W. Crooke.
St. John	Hardin	777	17	49.0	+ 3.5	75	20	16	11	44	3.44	− 0.28	0.96	T.	7	10	2	18	.....	Bethlehem Academy.
Scott	Kenton	.....	15	49.1	+ 4.8	75	22	18	11	43	4.29	+ 1.43	0.98	0.5	13	11	3	16	s.	E. B. Wilson.
Shelby City	Boyle	1,087	19	48.6	+ 6.0	75	20	11	11	45	2.40	− 0.74	0.65	1.2	9	13	5	12	s.	H. F. Ewing.
Shelbyville	Shelby	759	24	51.0	+ 7.1	75	19†	20	11	42	4.78	+ 0.83	.....	T.	....	13	5	12	sw.	C. R. Burnett.
Taylorsville	Spencer	489	11	49.2	+ 4.7	72	20	18	11	39	4.65	+ 1.29	1.82	0.4	13	12	3	15	s.	E. D. Bourne.
Weeksbury	Floyd	1,216	0	50.5	.....	75	20†	20	11	40	2.48	.....	0.90	3.5	10	18	3	9	s.	O. A. Lund.
Williamsburg	Whitley	939	17	49.1	+ 1.9	75	19	13	17	52	1.23	− 2.05	0.45	1.5	6	19	2	9	e.	Noble C. Jones.
Williamstown	Grant	943	11	47.6	+ 2.8	74	20†	17	11†	48	4.18	+ 1.82	1.53	T.	8	14	5	11	.....	Miss Rose Carter.
Tennessee.																				
Ashwood	Maury	725	40	54.0	+ 5.0	78	4	19	11	41	0.91	− 2.86	0.41	0	4	10	4	16	s.	Mrs. Joseph W. Fleming.
Benton	Polk	880	29	50.4	+ 1.2	75	20†	16	11	44	0.75	− 2.27	0.45	T.	5	19	5	6	n.	George L. Williams.
Bird's Bridge	Greene	.....	7	.....	.....	.....	.....	.....	.....	.....	1.61	.....	0.59	T.	5	20	1	9	e.	David B. George.
Bluff City	Sullivan	.....	18	.....	.....	.....	.....	.....	.....	.....	1.93	− 0.42	0.68	.....	4	13	2	15	e.	Walter C. Massengill.
Byrdstown	Pickett	1,026	21	52.8	+ 4.8	77	22	16	11	38	1.86	− 1.99	0.83	1.5	4	8	8	14	s.	John Lacy.
Carthage	Smith	500	30	53.6	+ 5.2	79	22	18	11	45	1.82	− 1.97	0.96	T.	5	17	0	13	nw.	Earl C. Pickering.
Cedar Hill	Robertson	625	15	53.2	.....	77	21	19	11	39	1.79	− 2.80	0.60	T.	6	15	8	7	s.	J. Frank Ruffin.
Celina	Clay	494	10	.....	.....	.....	.....	.....	.....	.....	1.43	− 1.75	0.83	T.	4	12	0	18	n.	Charles M. Anderson.
Charleston	Bradley	709	29	.....	.....	.....	.....	.....	.....	.....	0.57	− 2.54	0.37	T.	3	14	2	14	n.	John T. Weeks.
Chattanooga	Hamilton	808	34	52.8	+ 2.5	75	23	22	11	35	2.41	− 1.17	2.04	0.3	5	14	8	8	sw.	U. S. Weather Bureau.
Clarksville	Montgomery	500	53	54.7	+ 7.3	79	21	19	11	41	1.81	− 2.41	0.56	T.	5	13	7	10	se.	Dr. James A. Lyon.
Clinton	Anderson	800	29	.....	.....	.....	.....	.....	.....	.....	1.43	− 1.80	1.00	2.0	5	16	1	13	sw.	H. C. Slover.
Crossville	Cumberland	1,895	1	50.8	.....	73	18†	10	11	40	1.43	.....	0.46	2.0	5	13	10	7	.....	J. E. Converse.
Dandridge	Jefferson	.....	8	.....	.....	.....	.....	.....	.....	.....	1.12	.....	0.56	T.	5	22	2	6	w.	James E. Swann.
Decatur	Meigs	850	18	50.0	+ 1.4	76	22	13	11	43	1.22	− 2.08	0.85	T.	5	17	8	5	sw.	J. Worth Lillard.
Dickson	Dickson	800	20	53.6	+ 5.4	77	21	15	11	40	2.05	− 1.97	0.93	0	4	17	4	9	s.	Nathan R. Sugg.
Dover	Stewart	500	17	54.7	+ 6.3	80	21	18	11	43	1.99	− 2.56	0.82	0	3	12	5	13	s.	Asa M. Tippit.
Dunlap	Sequatchie	726	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. Bradford Boyd.
Elizabethton	Carter	1,575	22	.....	.....	.....	.....	.....	.....	.....	2.05	− 0.13	0.90	T.	5	21	2	7	e.	Charles Boyd.
Erasmus	Cumberland	1,850	16	47.7	+ 3.0	75	19†	17	11	48	1.70	− 1.90	0.74	2.5	5	14	11	5	se.	Mrs. Sara E. Ashley.
Florence	Rutherford	560	31	53.2	+ 4.6	75	22	19	11	37	1.32	− 2.21	0.67	T.	4	17	4	9	s.	Erastus P. Bell.
Franklin	Williamson	648	25	51.8	+ 3.9	71	15†	19	11	34	2.10	− 1.40	1.45	0	3	14	2	14	.....	Young M. Rizer.
Halls Hill	Rutherford	.....	10	.....	.....	.....	.....	.....	.....	.....	1.56	− 1.76	0.92	T.	5	15	6	9	s.	Edward F. Wright.
Hohenwald	Lewis	983	30	54.1	+ 5.8	75	21	17	11	39	1.25	− 2.79	0.65	0	4	17	6	7	s.	Mrs. Mary Lutzelman.
Iron City	Lawrence	600	18	52.0	+ 2.3	76	22	16	11	44	0.86	− 2.59	0.57	0	3	7	21	2	s.	Capt. H. Paul Seavy.
Jefferson City	Jefferson	.....	3	.....	.....	.....	.....	.....	.....	.....	1.02	.....	0.47	T.	3	.....	.....	.....	.....	Calvin C. Maddox.
Johnson City	Washington	1,620	20	47.2	+ 1.3	76	7	20	12	48	2.25	− 0.78	1.00	0.4	4	22	5	3	sw.	Ward Crosby.
Johnsonville	Humphreys	364	29	54.1	+ 4.9	78	21	18	11	44	1.60	− 2.76	0.63	0	7	11	5	14	s.	Miss Sallie B. Mathews.
Kingston	Roane	.....	29	.....	.....	.....	.....	.....	.....	.....	1.14	− 1.99	0.90	T.	3	13	0	17	n.	Henry Crumbliss.
Knoxville	Knox	977	42	50.2	+ 3.1	72	22	22	11	36	1.11	− 2.49	0.98	0.2	5	14	5	11	ne.	U. S. Weather Bureau.
Lebanon	Wilson	522	4	54.3	.....	75	21†	20	11	37	1.79	.....	1.00	T.	4	11	5	14	s.	H. Logan Fields.
Lewisburg	Marshall	727	19	52.8	+ 3.2	78	22	17	11	42	1.30	− 1.74	0.56	0.4	6	18	3	9	s.	Dr. Robert D. Crutcher.
Liberty	Dekalb	672	16	.....	.....	.....	.....	.....	.....	.....	1.70	− 2.02	0.75	0.5	5	17	0	13	n.	Bratten Evans.
Loudon	Loudon	816	22	48.6	.....	75	22	16	11	41	0.96	− 2.07	0.70	T.	2	14	1	15	w.	Robert W. Clark.
Lynnville	Giles	770	26	50.4	+ 1.5	73	22	20	11	36	1.34	− 1.99	0.56	T.	4	20	5	5	s.	Col. James H. Burrow.
McGhee	Monroe	.....	8	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.44	T.	3	19	0	11	e.	Miss Alice L. Headrick.
McMinnville	Warren	1,038	32	52.2	+ 3.8	80	22	14	11	44	1.16	− 2.48	0.61	T.	4	22	1	7	sw.	Horace H. Stiles.
Mountain City	Johnson	2,486	16	44.6	+ 2.2	73	19	13	2	51	1.64	− 0.73	0.62	1.0	6	24	1	5	.....	Edward E. Barry.
Nashville	Davidson	654	42	53.8	+ 5.1	74	21	23	11	35	1.84	− 2.01	0.92	T.	5	10	8	12	se.	U. S. Weather Bureau.
Newport	Cocke	1,280	23	.....	.....	.....	.....	.....	.....	.....	1.19	− 1.54	0.45	0.5	4	15	2	13	w.	Dr. Chas. T. Burnett.
New River	Scott	1,215	5	.....	.....	.....	.....	.....	.....	.....	1.54	.....	0.63	2.0	6	12	7	11	sw.	Burl W. Buttram.
Palmetto	Bedford	770	23	53.6	+ 3.2	77	22	17	11	38	1.22	− 1.70	0.57	T.	4	13	8	9	s.	Mrs. Ross Woods.
Perryville	Decatur	387	17	54.4	.....	80	22	20	11	41	1.47	− 2.83	0.53	0	5	20	6	4	.....	Oliver C. Kirksey.
Pinewood	Hickman	.....	7	54.0	.....	79	20†	14	11	52	2.48	.....	0.95	T.	4	13	9	8	s.	Miss Carrie Cash.
Rogersville	Hawkins	1,150	29	48.0	+ 1.8	74	7†	18	11	41	1.00	− 1.87	0.45	T.	6	20	4	6	e.	Fred Beal.
Rugby	Morgan	1,410	24	49.0	+ 4.3	75	20†	6	11	45	2.58	− 0.98	0.75	6.0	5	12	8	10	se.	Samuel G. Wilson.
Savannah	Hardin	442	30	55.2	+ 5.4	76	20†	20	11	44	1.94	− 1.79	0.90	0	5	11	11	8	s.	W. H. Carrington.
Sevierville	Sevier	.....	7	49.0	.....	73	21	16	11	42	1.11	.....	0.63	T.	4	12	8	10	sw.	Herbert O. Eckel.
Sewanee	Franklin	2,000	19	48.4	+ 0.2	71	26	19	11	28	1.13	− 2.52	0.43	2.0	4	19	6	5	se.	University of the South.
Sparta	White	920	7	51.4	.....	78	21	15	11	44	1.70	.....	0.70	2.0	6	14	9	7	w.	Ernest H. Hull.
Springville	Henry	377	11	54.0	+ 6.3	77	21	18	11	42	0.98	− 3.80	0.35	T.	6	17	4	9	s.	Hudnall A. Boden.
Tazewell	Claiborne	1,350	16	45.6	.....	75	22	14	11	47	1.31	− 1.86	0.88	1.5	3	15	2	13	sw.	J. Caloway Carr.
Tullahoma	Coffee	1,075	26	51.0	+ 3.9	74	22	16	11	38	1.42	− 1.99	0.60	0.8	5	17	8	5	s.	Reuben T. Moore.
Walling	White	909	9	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.60	T.	4	22	4	4	sw.	John K. Roberts.
Waynesboro	Wayne	753	28	53.0	+ 4.4	74	22†	18	11	41	2.25	− 1.24	1.26	T.	3	6	20	4	s.	Harry C. Boyd.
Wildersville	Henderson	500	17	53.2	+ 3.2	75	15	20	11	38	0.37	− 3.53	0.16	0	3	10	8	12	s.	William R. Wilson.
Worsham	Sumner	550	11	.....	.....	.....	.....	.....	.....	.....	2.46	− 1.55	1.11	T.	4	15	3	12	w.	James G. Elizer.
Yukon	Lincoln	850	17	52.3	+ 1.1	74	15†	19	11	39	1.44	− 2.14	0.58	0	5	13	12	5	sw.	William P. Watson.
Alabama.																				
Bridgeport	Jackson	660	13	.....	.....	.....	.....	.....	.....	.....	1.90	− 1.27	1.00	T.	5	.....	.....	.....	.....	R. L. Moore.
Decatur	Morgan	573	31	53.4	+ 2.6	76	7†	22	11†	46	1.23	− 2.10	0.53	0	3	.....	.....	.....	.....	A. H. Irons.
Florence	Lauderdale	620	29	54.2	+ 3.2	81	22	19	11	46	0.91	− 2.16	0.55	0	5	18	5	7	se.	Cyrus A. Ashcraft.
Guntersville	Marshall	580	3	.....	.....	.....	.....	.....	.....	.....	1.37	.....	0.75	T.	3	.....	.....	.....	.....	L. S. Long.
Madison	Madison	573	19	54.8	+ 3.3	76	21	20	10	42	1.28	− 1.75	0.73	0	2	13	8	9	.....	Edward Humphreys.
Riverton	Colbert	360	16	52.0	+ 1.9	76	20	18	11	51	1.44	− 1.92	0.84	0	5	.....	.....	.....	.....	James F. Long.
Scottsboro	Jackson	652	30	52.6	+ 2.4	77	23	16	11	50	1.68	− 1.90	1.25	T.	4	16	2	12	s.	H. A. Caldwell.
Tuscumbia	Colbert	488	31	52.9	+ 1.7	76	22	23	11†	47	0.94	− 2.16	0.64	0	3	.....	.....	.....	.....	Samuel Moore.
Georgia.																				
Mineral Bluff	Fannin	1,571	....	48.0	.....	75	24	17	11	42	0.13	.....	0.08	0	4	20	3	7	.....	W. T. S. Dickey.
North Carolina.																				
Altapass	Mitchell	2,629	....	44.8	.....	71	13	17	11	46	2.50	.....	1.90	6.0	3	22	3	5	nw.	Altapass Inn.
Andrews	Cherokee	1,800	3	47.8	.....	73	5†	12	11	46	1.94	.....	1.06	0.9	4	15	10	5	sw.	J. D. Link.
Asheville	Buncombe	2,255	34	47.8	+ 2.7	73	19	21	11	42	0.81	− 2.49	0.86†	0.1	5	17	7	6	nw.	U. S. Weather Bureau.
Banners Elk	Avery	3,750	5	41.1	.....	66	20†	12	1†	42	2.00	.....	0.83	4.0	4	22	0	8	w.	T. L. Lowe.
Blantyre	Transylvania	1,900	1	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.74	0	2	.....	.....	.....	.....	J. E. Davidson.
Blowing Rock	Watauga	4,090	4	.....	.....	.....	.....	.....	.....	.....	1.48	.....	0.86	2.0	3	.....	.....	.....	.....	E. G. Underdown.
Bryson City	Swain	2,000	25	.....	.....	.....	.....	.....	.....	.....	1.61	− 1.65	0.88	T.	6	.....	.....	.....	.....	D. K. Collins.
Cane River	Yancey	2,700	....	.....	.....	.....	.....	.....	.....	.....	1.74	.....	0.70	5.0	6	.....	.....	.....	.....	Hiram A. Proffitt.

TABLE 2.—*Daily precipitation for November, 1913. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Carolina—Contd.																				
Cullowhee	Jackson	2,100	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank H. Brown.
Ellijay	Macon	2,500	...	.....	.....	.....	.....	.....	.....	.....	1.20	.....	0.47	3.0	5	.....	.....	.....	.....	Chas. G. Mincy.
Highlands	....do	3,850	23	45.2	+ 3.2	69	20	13	11	38	2.11	− 3.58	1.06	1.5	4	16	9	5	se.	T. G. Harbison.
Hot Springs	Madison	1,326	15	49.9	+ 0.9	76	23	16	11	42	1.96	.....	0.77	5.0	5	16	10	4	w.	P. A. Garner.
Jefferson	Ashe	2,900	6	45.8	.....	75	22	15	2	49	2.30	.....	1.53	0.5	6	15	0	15	w.	Prof. E. J. Johnson.
Marshall	Madison	1,646	11	44.6	− 1.8	68	7†	20	11	44	1.03	− 0.94	0.41	2.0	4	.....	.....	.....	w.	M. L. Church.
Murphy	Cherokee	1,614	37	.....	.....	.....	.....	.....	.....	.....	1.51	− 2.57	0.74	T.	5	.....	.....	.....	.....	Miss Victoria Mingus.
Rock House	Macon	3,100	21	48.4	+ 2.0	69	13†	14	11	33	2.12	− 2.34	1.25	0.4	6	20	6	4	nw.	Barry C. Hawkins.
Transon	Ashe	2,600	1	.....	.....	.....	.....	.....	.....	.....	1.55	.....	0.85	0	3	.....	.....	.....	.....	S. M Transon.
Waynesville	Haywood	2,792	19	46.4	+ 1.0	75	19	17	1	46	1.28	− 1.07	0.57	4.5	6	18	2	10	sw.	Mrs. Chas. E. Quinlan.
Virginia.																				
Blacksburg	Montgomery	2,170	22	44.0	+ 1.8	76	19	18	1	44	2.37	+ 0.22	1.05	0.1	5	13	6	11	w.	Agricultural Experiment Station
Burkes Garden	Tazewell	3,250	18	42.0	+ 1.7	66	19	10	2	45	2.19	− 0.81	1.14	4.0	3	17	2	11	w	C. H. Greever.
Elk Knob	Lee	3,243	10	49.8	+ 4.8	68	22	16	11	25	1.57	− 1.51	0.79	3.0	5	17	2	11	s.	Henry Nicoll.
Emory	Washington	2,094	1	45.0	.....	71	22	16	26	45	1.13	.....	0.65	2.0	4	23	2	5	.....	J. E. Weaver.
Ivanhoe *	Wythe	2,028	9	.....	.....	66	19	20	1	34	1.49	.....	1.04	0.5	3	19	1	10	w.	Miss Alice G. Jewett.
Max Meadows	....do	2,028	17	42.7	+ 0.7	73	21	14	2	50	1.30	− 0.66	0.68	0.5	4	17	4	9	w.	James M. Graham.
Mendota	Washington	1,350	4	.....	.....	.....	.....	.....	.....	.....	1.67	.....	0.45	1.0	4	.....	.....	.....	.....	Frank M. Barker.
Mountain Lake	Giles	4,348	3	44.6	.....	70	22	12	11	32	2.70	.....	1.50	6.0	4	21	1	8	.....	H. E. Dorland.
Radford	Montgomery	1,773	4	.....	.....	.....	.....	.....	.....	.....	1.46	.....	0.86	T.	2	.....	.....	.....	.....	Arthur Roberts.
Speers Ferry	Scott	1,221	17	.....	.....	.....	.....	.....	.....	.....	1.50	− 1.76	0.60	3.0	4	.....	.....	.....	.....	Miss L. E. Venable.
Wytheville	Wythe	2,293	20	45.0	+ 2.0	73	22	20	1	39	1.52	− 1.52	0.87	3.3	5	16	6	9	w.	U. S. Weather Bureau.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 3, Ohio Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
New York.																																
Allegany	Allegany			.03	.10				.17	1.83	.02	.10	.40	.39	.13		.02		.13	.05	.10	.02		.10	.11		.03	.06	.07		.07	3.93
Bolivar	do	T.			.10				.12	.92	T.			.45	.30				T.	T.	T.			.17	.09		T.		T.		.15	2.30
Olean‖	do	.18			.12					.70	.78	T.		.15	.35	.05				.06		.08		.10	.15					.10		2.82
Pennsylvania.																																
Aleppo	Ohio									.08	.10				.40	.27	1.00						.10				.12					2.07
Baldwin	Allegheny								.38	.60	.40	.11	.10	.56		T.	.10		.10					.20			T.	T.	.05	T.		2.60
Beaver Dam‖	Ohio	T.			T.				.14	.45	1.39	.01	T.	.03	.42	.03	.10			.01	T.			.03			T.	.06	T.	.04	.02	2.73
Beaver Falls‖	do	.03			T.				.16	.47	1.10	T.	T.	.23	.46	.03	.06	T.		T.	T.			.03				.06	T.	.12	T.	2.75
Brookville	Allegheny				.07				.31	.42	.31	.40		.56	.30		.12			.04	.04			.08			.06	.08	.03	.12	.06	3.00
California	Monongahela			T.					.20	.25	.27				.24	.41	2.21		T.					T.			.05	T.	.01	.01	T.	3.65
Cheat Haven	do				T.				.11	1.48	.22	T.		.04	.31	.48	1.10		T.	.02	T.			.08			.08	.03	.04	T.	.02	4.01
Clarion‖	Allegheny				.05				T.	.74	.82	.11	.18	.30	.50	T.	.16	.06		.12	.08	T.		.20	T.		.05		.06	.15		3.58
Claysville	Ohio								.18	1.80	.20	T.		T.	.40	.18	.56							.02			.11	T.	.12	.06	T.	3.63
Confluence‖	Youghiogheny	T.			.05				T.	1.06	.98	.05	T.	.05	.25	.08	1.29	.12						.20	.05		T.	.15	.05	T.		4.38
Coraopolis‖	Ohio	T.			.04				.08	.60	1.00	.15	T.	T.	.36	T.	.13			.02				.02			T.	.10	T.	.16	.01	2.67
Davis Island Dam.‖	do	.01			T.				.03	.60	1.20	.02	T.	.05	.45	.04	.14			.01				.01			T.	.09	.01	.14	.01	2.81
Derry Station	Allegheny								.28	2.07	.06			T.	.31	.07	.49		T.		.03						.18	.13		.25		3.87
Edinboro	do			T.	.30				.48	1.30	.80	1.00		.95	.10		.03		.07	.10	.13			.05			.01	T.	.01	.06		5.39
Ellwood City‖	Ohio	.02			.07				.18	.26	1.40	.05	T.	.06	.57	.03	.06	.03			.04			.09			T.	.11	T.	.13	.03	3.13
Franklin‖	Allegheny				.08				.25	.71	.92	.03	.06	.28	.38	.05	.06	T.		.04	.13	T.	.08	.02		.07	T.	.05	.19	.02		3.42
Freeport‖	do	T.			.03				.08	1.10	.72	T.		.06	.42	T.	.15	.01			.04			.06				.06	.05	.17	.01	2.96
Greensboro‖	Monongahela								.04	1.00	1.40	.10		.10	.40	.08	1.30	.20						.06				.12	T.	.06		4.86
Greensburg	Youghiogheny				.01				.27	1.22	.27	T.		.04	.30	.09	.48		T.		.02			.01			.17	.14	.01	.26	.01	3.30
Greenville	Ohio			T.	.04				.43	1.30	.53	.16	T.	.54	.18	.05	T.		.04	.06	.10	T.		.03	T.		.06	.04	.05	.06	.02	3.69
Grove City	do				.08				.44	1.37	.42	.05		.57	.24		.04		T.	.08	.05			.14			T.	.01	T.	.07	T.	3.56
Herrs Island Dam‖	Allegheny	T.			T.				.01	.62	1.32	.02	T.	T.	.38	.02	.19	T.		T.	T.			.01			T.	.08	.01	.13	.01	2.80
Indiana	do				.08				.32	1.55	.27	.14		.33		.05	.16				.05									.38		3.33
Irwin	Monongahela	.65								1.46	.05			.09	T.	.39	.45	.01									.15	.10	T.	.20		3.50
Johnstown	Allegheny				.08				.24	1.68	.28	.01		.04	.18	.11	.49		T.		.03			.04	T.		.06	.18	.13	.26	.05	3.86
Lock No. 4‖	Monongahela				.03					.91	.80	.02		.01	.23	.03	.65	.05						T.			.05	.08	.03	.08	.01	2.98
Lycippus	Allegheny	T.			.08				.28	1.83	.49		T.	.08	.23	.10	.75		T.					.18			.18	.11	T.	.11		4.42
Mosgrove	do	T.			.04				.02	.65	.87	.02	.03	.15	.53	.02	.04	.02		T.	.01	T.		.03	T.			.02	.01	.19	T.	2.65
Parkers Landing‖	do				.06				.15	.60	.70	.20	.10	.25	.38	.05	.04	.02		.04	.08			.18	.01		.01	.03	.02	.06	.02	3.00
Pittsburgh	Ohio			T.	T.				.10	1.62	.07	T.		T.	.32	.04	.17		T.	T.				.01			.07	.04	.11	.01		2.66
Punxsutawney	Allegheny			.11						1.60	.30	T.		.68	.27		.12		T.		.06				T.			T.		.30		3.44
Ridgway	do								.40	.48	*	1.66		.66	.06		.18		.07		.15				.16		.13	.07		.13		4.15
Saegerstown	do				.10				.51	.60	.70	.55		.69	.10		.05		.01		.16			.01				.01		.10		3.59
Saltsburg‖	do	.02			.06				.02	.92	.97	.04	.01	.05	.32	.03	.38	.02						.01	T.		T.	.13	.06	.24	T.	3.28
Sharon‖	Ohio	T.			.02				.22	.67	1.03	T.	.01	.27	.28	T.	.02	T.	T.	.08	.01	T.					.02	.01	.03	.07	.01	2.75
Somerset	Youghiogheny								.25	1.15	.65	.30			.27	.43	.62							T.			.11	.14	.12	.10		4.14
Springdale‖	Allegheny				.02				.02	.70	.85			.04	.45	.03	.18	.01						.03				.08	.03	.20		2.64
Uniontown	Monongahela								.82	.98	.56		1.80		.45	.44	.95							.12			.10	.04		.08		6.34
Warren	Allegheny				.50				.10	.40	.27	.27		1.00			.10			.06	.24			.10				.10		.65		3.79
West Newton ‖	Youghiogheny				.10				.01	.60	.65	.15	T.	.08	.23	.05	.60	.04						.10			.02	.15	.06	.09	.02	2.95
Maryland.																																
Deer Park	Youghiogheny							.26		.80	.40	.20			.40	.64	1.01							.16				.07				3.94
Grantsville	do				.10				.16	1.67	.60	.10		.10	.10	.38	.75							.14					.28			4.38
Oakland	do				.10				.60	.95	.40	.08		.06	.15	.65	.54							.25			.12	.15	.10	.01	.05	4.21
West Virginia.																																
Bancroft ‖	Great Kanawha								.25	.40	.55				.35	.37	1.30	.10										.05	.60	.05	.05	4.07
Beckley	do									1.20	1.30	.60	.10				.35											.53		.62		4.70
Bens Run	Ohio								.18	.52	.13	.08		.40	.65	.80	.80							.30			.20	.01		.09		4.16
Bluefield	Great Kanawha									.20	.10	.05					.15							.06							.05	0.61
Brandonville ‖	Monongahela								.68	.68				.60			2.24	.10									.30	.71				5.31
Buckhannon	do								.32	2.00	1.00	.10		.25	.80	1.23	1.20										.10	.10	.25			7.35
Cairo	Little Kanawha								.25	.65	.75			.12	.52	.42	1.60										.14	.12	.08		.02	4.81
Central Station	Mid. Isl. Creek	*	*	*	*	*	*	*	*	1.55	.66	T.		T.	.48	.74	.98		T.	*	*	*	*	*	*	*	*	*	*	*	.20	4.61
Charleston ‖	Great Kanawha								.35	1.00	1.10				.25	.30	1.04	.42							.02			.15	.42	.03	.10	5.18
Cheat Bridge ‖	Monongahela								.15	1.15	.30	.05			.45	.50	1.15	.38				T.		T.			T.	.21		.35		4.69
Cortland ‖	do									1.00	*	2.40			.90	.46	1.00											.40			.13	6.29
Creston ‖	Little Kanawha								.11	.63	.60	T.			1.50	.22	1.11	.05							.04			.31	.05	.32		4.94
Cuba	Sand Creek								.40	.80	.40			.10	1.04	.86	1.08		T.					T.			.16	.19	.20			5.23
Davis ‖	Monongahela	T.			.20					1.26	1.20	.60	.60	.08	.40	.32	1.60	.08			T.	T.			.03			.15	.08			6.60
Elizabeth ‖	Little Kanawha								.31	.10	1.40	.05			.60	.14	1.65	.02									.14	.04			.08	4.53
Elkhorn	Big Sandy								.56	1.42					.11		.83						.07									2.99
Elkins	Monongahela				T.				.75	1.50	.14	.02	.05	.05	.68	1.02	.76		T.		T.			.06			.10	.21	.10		.03	5.47
Fairmont ‖	do				T.				.02	1.21	1.22	.03	T.	T.	.53	.10	1.86	.07						.02	.02		T.	.22	.02	.01	.05	5.38
Glenville ‖	Little Kanawha									.72	1.32				1.18	.23	2.12	.03														5.60
Grafton	Monongahela								.06	2.50	.28	.12		.25	.65	.95	.95										.20	.15	.15			6.26
Green Sulph. Springs	Great Kanawha								.33	1.10	.02	T.			T.	.30	.50							T.				.10	.60		.02	2.97
Hinton ‖	do								.06	1.22	.06	.18			T.	.08	.12	.33											.54			2.59
Holcomb	do								*	*	2.30			*	*	*	2.15											*	.97			5.42
Huntington ‖	Ohio								.46	.20	.56				.48	.30	1.28	.12										.12	.68		.06	4.26
Lewisburg	Great Kanawha								1.26	.50	T.				T.	.35	.55							T.				T.	.60		.03	3.29
Logan	Guyandotte								.43	.52	.34			.12	.26	T.	.72	.06						.15				.10	.30		.12	3.12
Lost Creek	Monongahela								.16	1.66	.11	T.		T.	.29	1.75	.91		T.		T.			.11			.16	T.	T.	T.		5.15
Madison ‖	Great Kanawha								.23	.25	.70				.55	.40	.86	.51							.11			.10	.11	.55	.02	4.39
Mannington	Monongahela				.01				.09	1.57	1.00	.02		.08	.50	.69	.99							.06			.10	.07	.04	.04	.02	5.28
Marlinton	Great Kanawha								.40	.75						.70	.50											.12	.40		.18	3.05
Morgantown	Monongahela								.17	.97	.40	T.		T.	.23	.29	.28							.04			.05	.02	.02	.04		2.51
Moundsville	Ohio				.08				.25	.67	.92			T.	.44	.22	.61							.04			.14	.01	.08	.06	.03	3.55
New Cumberland	do				T.			T.	.20	1.20	.20	T.		T.	.50	.10	.10		T.	T.				.10			.08	.08	.08			2.72
New Martinsville	do								.30	1.60	.20			.08	.70	.50	.75							.08			.20		.05	.05		4.51
Nuttallburg	Great Kanawha								*	1.00	1.30				.25	*	1.76							.20								4.51
Parkersburg	Ohio			T.				T.	.30	1.61	.24	T.		T.	.40	1.17	.54		T.					.03			.20	T.	.06	.04	.03	4.62
Parsons	Monongahela								.95	1.20	.80	.50		*	*	*	3.35							.35			T.	T.	T.	.35		7.50
Philippi	Monongahela				T.				.22	1.52	.36	.03			.72	1.01	1.03	.02	T.					.11			.06	.20	.09	T.	.01	5.38
Pickens	do								.29	2.30	1.00	.30		.15	1.28	.66	1.58					T.		T.				.76	.51			8.83
Point Pleasant ‖	Ohio								.40	.32	.96				.48	.22	1.30	.06							.02		.02	.20	.22	.20		4.40
Powellton	Great Kanawha								.47	.60	.60				.63	.30	1.20							.10	.03				.67	.02	.06	4.68
Princeton	do								.50	.50					.10		.80															1.90
Robertsburg ‖	do								.30	.24	.60				.45	.20	1.40	.08										.10	.53	.15		4.05
Rowlesburg ‖	Monongahela				.02					1.10	1.00	.10	.14	.06	.68	.24	2.00	.30						.02	.22			.26	.04			6.18
Ryan	Great Kanawha								.53	.94	.24			.10	.40	.57	1.26							.05			.07	.09	.45		T.	4.70
St. Marys ‖	Ohio								.20	.35	1.70	.10			.60	.05	1.60	T.							.05		.35				.10	5.10
Smithfield ‖	Fishing Creek								.12	.33	2.30	.36	.74	.81	.31	.64	1.30	.07						.08			.11	.16		.03	.08	7.44
Spencer ‖	Little Kanawha								.23	.55	1.55		.85			.65	1.83	.10												.36	.10	6.22

TABLE 2.—*Daily precipitation for November, 1913. District No. 3*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
West Virginia—Con.																																
Sutton ‖	Great Kanawha								.19	.51	*	*	*	1.60	.51	.61	1.20	.15											.51	.01		5.29
Union	do									.80	.12					.55								T.				.07	.37			1.91
Wellsburg	Ohio								.26	.95	1.20					.21		.20	.07					.05			.10	.05	.05	.03		3.17
Weston ‖	Monongahela				T.				.10	1.20	.80	T.		.06	1.14	.42	2.00	.10		T.					.06			.20	.08	.06		6.22
Wheeling ‖	Ohio				.01				.20	.52	1.53	.03	T.	.04	.33	.05	.65	.05		T.				.01	T.		.05	.13		.15	.02	3.77
Williamson ‖	Big Sandy								.36	.76	.20					.24	.36	.34							.04			.02	.28			2.60
Ohio.																																
Amesville	Ohio							T.	.55	.50	.40	T.		T.	.92	.62	.85		T.					T.			.10	T.	.10	.06	T.	4.10
Ashland	Muskingum			T.				T.	.63	1.00	.80	T.	.10		.02	T.	T.	T.	T.	T.	T.			T.			T.	T.	T.	.01	T.	2.56
Bangorville	do			T.	T.			.15	.67	.60	.80	T.		.04		.09			.07	T.	.02			T.			.15		.05	.07	.02	2.73
Bellefontaine	Great Miami							.03	1.04	.10	.70			.07	.03	.02	.08			T.							1.11		.17	.16	.24	3.75
Bladensburg	Muskingum							.22	.65	.60	.60			.03	.60	.10	.05		.03					.10			.25	.10	.12	.08	T.	3.53
Brilliant	Ohio							T.		.25	1.80	T.	.20	T.							T.			.20	T.			T.	T.	.20		2.65
Cadiz	do			.02				.02	.20	2.00	1.78			.03		.92			T.				T.				.16	T.	.08	T.		5.21
Cambridge	Muskingum								.71	1.80	.60			.03	.61	.23	.37										.29		.16	.07		4.87
Camp Dennison	Little Miami							.38	.55	.06	.04			T.	.55	.71	.47							.12			.23	.02	.50	.27	.19	4.09
Canton	Muskingum			T.				.30	.40	1.00	.20	T.		.15	.38	.08	.02		.05					.04			.08	.05	.10	.05		2.90
Chillicothe ‖	Scioto								.95	.06	.66		T.	.26	T.	.53	.64							.01			.06	.08		.37	.10	3.72
Cincinnati	Ohio			T.				.77	.04	.10	T.			.16	.28	1.24	.29						.06	.03			.21	.02	.53	.21	.32	4.26
Circleville	Scioto				T.			.76	.41	.15	.22			T.	1.30	.63	.41		T.					.06			.26	.03	.13	.16	.17	4.69
Clarington	Ohio								.30	1.25	.40			.50	.50	.32	.75		T.					.05			.10	.05	.02	.01	.02	4.27
Columbiana	do			.02					.02	1.66	.40			.12	.27	T.	T.										T.	T.		.13		2.02
Columbus	Scioto			T.				.83	.12	.68	.12	T.		.61	.55	.34	.21		T.	T.			.04	.02			.36	.03	.12	.15	.38	4.56
Coshocton ‖	Muskingum				.02				1.10	.25	1.70	.01			.60									.10			.11	.05	.04	.09	.05	4.17
Dayton (1)	Great Miami							.51	.17	.25				.44	.58	.75	.14		T.		.05		.07	.01		T.	.18		.30	.20	.38	3.98
Dayton (2)	do							.14	.56	.04	.26			T.	1.03	.61	.34						T.	.15			.21	T.	.45	.30	.51	4.60
Delaware	Scioto								.53	.03	.42	T.		T.	.37	.10	.02		.02					.02			.30	.03	.03	.17	.02	2.06
Demos	Ohio				.02			.03	.29	1.30	.30			T.	.05	.21	.65		T.		T.			.09			.17	.10	.19	.05	T.	3.45
Dennison	Muskingum							T.	.45	.97	.55				.64	.08	.11		T.					.02			.11	.06	.03	.08		3.10
Frankfort	Scioto							.15	.75	.30	.45			T.	.50	.65	.64							T.			.10		.35	.10	.40	4.39
Gallipolis ‖	Ohio								.41	.23	.45				.44	1.18	1.35	.03										.15	.26	.08		3.58
Garrettsville	Mahoning			T.	.03			T.	.30	1.31	.66	.04		.36	.18	.02			.10	.03	.06						.01	.04	T.	.12	T.	3.26
Granville	Muskingum							.62	.45	.40	.15	T.		T.	.61	.17	.05							.08			.16	T.	.07	.10	.07	2.93
Green	Ohio								T.	.30	T.			.80	.15	.30	1.40											T.	.10	.20	.61	3.86
Green Hill	Muskingum			T.	T.			.05	.24	.72	.23	T.		.11	.38	T.	.02		T.	T.			T.	T.			.05	.03	.06	.05	T.	1.94
Greenville	Great Miami							.10	.27		.35			.02	.70	.48	.02		T.	.02				.01			.18	.04	.35	.55	.45	3.54
Hamilton	do							*	.82	.01	.04				.97				.04					.09		.01	.27		.18	.26		2.69
Haydenville	Ohio																															
Hillsboro	Scioto																															
Ironton	Ohio							.01	.52	.31	.05			.15	.25	.22	1.17							T.			.08	.15	.53	T.	.08	3.52
Killbuck	Muskingum							T.	1.20	1.00	1.40	.20		.20	.10	.15				T.	.18			.05			.08	.10	.12	.10	T.	4.88
Kings Mills ‖	Little Miami								.94	.03	.17				.64	.46	.88							.11			.10	.11	.05	.45	.09	4.03
Lancaster	Ohio			T.				.50	.48	*	.90	T.		T.	.78	.35	.47		T.					.05			.18	.03	.16	T.	.18	4.08
McConnellsville	Muskingum			T.				.09	.69	1.12	.31	.02	T.	T.		.98	.86		.02					.02				.02	.28	.26	.06	4.67
Marietta	Ohio								.32	1.09	.43				.57	.71	.70										.18	.11	.03	.04	.01	4.19
Marion	Scioto							.08	.80	*	.81				.50	.12			.08								10		.05	.05	.15	2.74
Milfordton	Muskingum							.24	1.06	.40	.45	.40				T.	.59	T.		T.	T.						22		T.	.21	T.	3.57
Milligan	do								.65	.80	.40	T.				1.55											.53	.06	.04	.04		4.07
Millport	Ohio							T.	.38	1.90	.25			.16	.43	T.	T.		T.				T.	.10			.06		T.	.06		3.34
Nellie	Muskingum							T.	.15	1.30	1.00	T.		.07	.45	T.	.04		T.					.04			.15	T.	.05	.05	T.	3.30
O. S. University	Scioto							.41	.69	.45	.40				1.11	.24	.37		.03					.04			.31	.04	.11	.13	.27	4.60
Pataskala	Muskingum							.49	.51	.30	.37	T.		.01	1.12	.21	.35		.01	T.				.24			.33	.03	.22	.12	.11	4.42
Peebles	Ohio							.65	.42	.04	.09			.15	.42	1.25	1.00							.10			.24	.07	.31	.09	.20	5.03
Philo (1)	Muskingum							.18	.70	1.36	.06	T.		T.	.76	.18	.68		T.					T.			.28	.02	.17	.07	T.	4.46
Piqua ‖	Great Miami								.38		.34			.25	.85	.07	.25	T.			T.						.35		.05	.32	T.	2.86
Plattsburg	Little Miami							.07		.50					1.35	.43	.28		T.										.58	.24	.32	3.77
Portsmouth ‖	Ohio								.64		.28				.58	.38	1.64											.13	.86	.08	.02	4.01
Sidney	Great Miami							.10	.57	.08	.48			.05	.72	.17			.01								.34	.04	.17	.11	.22	3.06
Somerset	Muskingum							.13	1.00	.60	.65	T.		T.	.92	.26	.42							.07			.18	T.	.19	.10		4.52
Springfield	Great Miami							.22	.68	.25	.31				.92	.41	.25		T.	T.			T.	.09			.27	.03	.10	.24	.33	4.10
Summerfield	Ohio								.61	1.35	.43	.10		.01	.51	.21	.78		T.					.03			.20		.13	.06		4.42
Syracuse	do								.51		1.20				.72	1.03	.86										.20	.13	.33	.11	.03	5.12
Thurman	do							T.	.53	.40				T.	.50	1.35	.80										.08	T.	.75	T.	T.	4.41
Toboso	Muskingum								.95	.10	.90				1.10		.55												.22		3.82
Urbana	Great Miami							.21	.42	.14	.31			T.		.30			.02					.08			.31	.05	.16	.22	.27	2.49
Warren	Mahoning							.04	.32	1.55	.57	.12		.43	.18	.04			.07	.04	T.							.04	.10	.05	.03	3.58
Waverly	Scioto							.51	.42	.15	.15			T.	.22	.75	.75							.04			.11	.03	.25	.15	.20	3.73
Waynesville	Little Miami							.30	.48	T.	.20				1.32	.63	.50							.08			.28		.30	.32	.35	4.76
Wooster	Muskingum							.05	.63	1.00	.80	T.		.50	.40	.03	.04		.05	T.							.07	T.	.10	.10	T.	3.77
Youngstown ‖	Mahoning								.22	.28	.42			.23	.31		T.			.08	T.			.03			T.	T.		.05	.04	1.66
Zanesville ‖	Muskingum								.98	.20	.80	T.	T.	T.	.73	T.	.66	T.	T.	T.				.06			.02	.15		.34	.08	4.02
Indiana.																																
Anderson	W. Fork, White							T.	.35	.15	T.				.38	.53				.05							.25	.05	.25	.09	.28	2.38
Bloomington ‖	do							.08	.63	.04	T.	T.		.03	.81	.83	.59				T.			.45			.16	T.	.12	.22	.06	4.02
Bluffton ‖	Wabash								.68		.16			.16	.35	.10											.02	T.	.06	.52		2.05
Butlerville	E. Fork, White								.81	.10	.08			.10	.48	1.12	.60							.17			.30		.18	.30	.34	4.58
Cambridge City ‖	Whitewater								.60		.03				.92	.44	.52				.10			.08			.21	.05	.47	.85	.05	4.32
Columbus ‖	E. Fork, White								.58	.01					.80	.65	.55							.28			.28	.05	.12	.23	.13	3.68
Connersville	Whitewater							T.	.48						.99	.76	.16										.23		.42	.35	.28	3.58
Crawfordsville	Wabash								.70		T.				.50	.85				.20			T.						.60	.45	.60	3.90
Delphi ‖	do								.56		T.			.28	.44	.28	.04				.32			.07			.23		.28	.28	.19	2.97
Evansville	Ohio							.63	.03	.01	T.		T.	.01	1.48	.86	.30						.03	.01		T.	.04	.35	.15	.15	.82	4.87
Farmersburg	Wabash							.41	.19	T.	T.		T.	.01	.55	.99	.11			T.				.76			.49		.56	.49	.52	5.08
Farmland ‖	W. Fork, White								.47		.13			T.	.53	.10	.25		.04		.03			.17			.14	.05	.18	.29	.02	2.40
Forest Reserve	Ohio							.31	.75	.02				.10	.63	1.23	1.24							.05			.12	.11	.16	.13	.35	5.20
Greenfield	E. Fork, White							.05	.57	.14					.93	.73	.05			T.		T.		.70			.39		1.20	.18	.47	5.41
Greensburg	do							.40	.55	.05				.15	.80	.90	.10										.20			.40	1.00	4.55
Hickory Hill	W. Fork, White							.22	.60	T.	T.			.08	.70	.87	.25							.40			.38		.21	.18	.40	4.29
Huntingburg	Wabash								1.11						2.02	.70	1.05							.15			.20	.45	.86	1.08	.50	8.12
Huntington	do							T.	.55	.10	T.			.10	.30	.12			T.	.38							.10	T.	.10	.48	.50	2.73
Indianapolis	W. Fork, White							.58	.01	.12	T.		.01	.68	.28	.86	.01		T.	.01		T.	.72			.08	.37	T.	1.82	.09	.56	6.20
Jeffersonville	Ohio							.61	.22	.02	T.			.18	.83	1.05	.69							.08			.01	.16	.03	.05	.43	4.36
Judyville	Wabash							.07	.13					.05	.61	.43				.24				.09			.15	.02	.40	.50	.60	3.29
Kokomo	do							.08	.44	.09	T.		T.	T.	.18	.31	.09	T.		T.							.17	.03	.55	.30	.32	2.56
Lafayette ‖	do			T.				.14	.20	T.	T.		T.	.05	.70	.29	.04			.32	T.		.04				.35	.03	.38	.60	.65	3.88
Logansport ‖	Wabash								.55	.10	.18			.16	.37	.13	.15				.32						.19		.20	.28	.18	2.81
Madison	Ohio							.37	.61	.10	.10			.17	.39	1.12	.76							.08			.09	.03	.35	.14	.35	4.66
Marengo	do								.64		T.				2.40		1.42							.21				.46		.14	.15	5.42
Marion ‖	Wabash							.15	.53	.10	T.		T.		.40	.19	.03		.06	.20			.02				.11		.19	.22	.39	2.59
Mausy	E. Fork, White							.07	.56	.15	T.				1.05	.75	.13		T.	T.				.10			.25		.73	.25	.45	4.49

TABLE 2.—*Daily precipitation for November, 1913. District No. 3*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***Indiana*—Continued.**																																
Monticello ‖	Wabash							T.	.44	.30	T.			.25	.38	.13	.23			T.	.21			T.			.25	T.	T.	.40	.40	2.99
Moores Hill	Ohio							.14	.65	.15	.10			T.	.65	.90	.55							.10			.28	.02	.26	.25	.35	4.40
Mount Vernon ‖	do								.60	.06		T.		T.	.08	1.20	1.19							.01			T.	.42	.20	.10	.36	4.22
Nashville	E. Fork, White							.15		.10	T.			.43	.69	1.12	0.36			.01				.28		T.	.29	T.	.14	.29	.43	4.29
Paoli	do							.09	.54	T.	T.				.93	1.88	.69							.16			.18	.14	.17	.39	.30	5.47
Princeton	Wabash							.11	.54	.49					.89	.85	.02							.22			.34	.19	.18	.29	.48	4.60
Richmond	Whitewater							.46	.05	.09	T.			.49	.29	.62	.13		T.	T.			.07			.09	.20	.01	.85	.28	.50	4.13
Rochester	Wabash																															
Rockville	do							.31	.30	T.	T.			.13	.37	1.25	.03		T.	.14	T.		.12	.06		T.	.33	T.	.90	.46	.70	5.10
Rome	Ohio							.03	.84	.01	T.	T.		.75	1.11	.55	1.44							.03			.02	.52	.07	.03	.24	5.64
Salamonia	Wabash			T.				.07	.53	.15	.42	T.	T.	.15	.54	.25			.05	.04			.03	.12			.11	.08	.02	.10	.57	3.23
Salem	Ohio							.16	.60	T.	T.				.52	1.75	.92							.14				.10	.16	.22	.45	5.02
Scottsburg	E. Fork, White							.39	.73	T.				T.	.52	1.04	.98							T.			.21	.09	.15	.08	.39	4.58
Seymour	do							.10	.43	T.	T.			.03	.57	1.15	.45	.01	T.	T.			.38			T.	.19	.03	T.	.30	.43	4.07
Shelbyville	do							.24	.58	.10	.05				.75	.76	.22			T.		T.		.21			.35	.01	.68	.08	.71	4.74
Shoals ‖	do							.11	.56	T.		T.		T.	.43	1.12	.82										.18	.06	.20	.23	.08	3.79
Terre Haute	Wabash							.56	.03	T.	T.		T.	.38	.46	1.02	.02	T.		.02			.95			.05	.23	T.	1.66	.45	.68	6.51
Veedersburg	do							.03		T.	T.			.06	.52	1.02	.03		.01	.15	.02							.02	.46	.43	.42	3.17
Vevay	Ohio							.10	.75	.20					.50	1.00	1.25							T.			.10		T.	.25	.35	4.50
Washington	W. Fork, White							.31	.17	T.	T.				1.04	1.46	.20							1.15			.25	.03	.17	.24	.71	5.73
Whitestown ‖	do							T.	.93	.10	.06				.41	.38	.44		.01	.01	.09		T.	.29			.08	.05	.14	.50	.05	3.54
Winona Lake	Wabash							.03	.49	.04	.06			.33	.08	.07			T.	.25	.02		T.				.14		.02	.39	.43	2.35
Worthington	W. Fork, White							.10	.51	T.				T.	.84	1.03	.29			T.							.63		.14	.30	.32	4.16
Illinois.																																
Albion	Wabash							.59	.03	T.					1.14	.70	.15						.33			T.	.42	.12	.64	.34	.54	5.00
Casey	do							.40	.05	T.				T.	.65	1.40	.15						.85					.42	1.14	.52	.74	6.32
Charleston	do							.05	.08	T.				T.	.38	1.57	T.			T.			T.				.26		.30	.50	.75	3.89
Danville	do			T.				.07	.09	T.	T.			.05	.82	.91	.05			.25	T.		.07			T.	.18	T.	.87	.82	.68	4.86
Equality	Ohio							.43	T.		T.			.02	.70	.64	.70									T.	T.	.37	.45	T.	.62	3.93
Fairfield	Wabash							.43	T.	T.	T.				1.25	.50	.21						T.	.23			.54	.07	.17	.43	.57	4.40
Flora	do							.38	.03		T.		T.	T.	1.56	.80	.39						.32			T.	.13	.02	.08	.26	.70	4.67
Golconda	Ohio							.58	.80				.28	.18			1.36											.71	.18	.30	.38	4.77
Hoopeston	Wabash							.13	.05	T.	T.		T.	.07	.43	.44	.04			.17	T.		.07				.43	.03	.43	.34	.68	3.31
McLeansboro	Ohio							.22			.14				.14	.58	.25					T.	T.					.23	.42	.22	.60	2.80
Metropolis	do							.60	.04				.34			.83	.43							.08				.38	.21	.18	.55	3.64
Montrose	Wabash							.14	T.		T.			.08	.72	1.97	.09		T.	T.			.86			T.	.48		.68	.49	.96	6.38
Mt. Carmel ‖	do							.02	.63	.04		T.			.28	1.19	.62							.31			.28	.12	.39	.33	.39	4.60
New Burnside	Ohio							.06	.45					.04	.18	.55	1.00							.03				.60	.62	.18	.48	4.19
Newton	Wabash							.44	.01		T.		T.	T.	1.21	1.67	.27			T.			.67			T.	.27		.37	.35	.67	5.93
Olney	do								.68	T.		T.		T.	.78	1.90	.58							.10			.12	T.	T.	.36	.37	4.89
Palestine	do			T.				.39	.19	T.	T.			T.	1.10	1.53	.27			T.	T.		.06	.28		T.	.26		.27	.40	.60	5.35
Paris ‖	do								.50	T.				T.	.60	1.37	.08		T.	T.	T.			.18			.30	T.	.35	.40	.25	4.03
Philo	do							T.	.03					.05	.34	1.21	.04			.17			.28				.18		.30	.48	1.00	4.08
Rileyville	Ohio							.35						T.	.73	.35	.52						T.	.17		T.	T.	.27	.81	.23	.33	3.76
Shawneetown ‖	do								.94					.01	.04	.81	1.48											.38	.30	.18	.28	4.42
Sidell ‡	Wabash																															3.84
Tuscola	do			T.				T.	.05	T.	T.			.07	.66	1.23	.04			.18			.14			T.	.23	T.	.46	.43	.80	4.29
Urbana	do			T.				T.	.03		T.		T.	.31	.59	.91	.04			.16	T.	T.	.05				.06	T.	.94	.34	1.06	4.49
Kentucky.																																
Alpha	Cumberland							.65	T.	.30							.70							T.							.43	2.08
Anchorage	Ohio							.60	.40	.05	T.			.34	.77	.95	.87							.03				.18	T.		.34	4.53
Bardstown ‖	Salt							.05	1.90	.03	.02				.32	.87	.89	.07						.03				.31	.10		.17	4.76
Beattyville ‖	Kentucky								.60	.24	.18	.08			.06	.46	.32	.22										.18	.16		.04	2.54
Beaver Dam ‖	Green								.63						.43	.46	.53							T.				.15	T.	T.	.14	2.34
Berea	Kentucky								.75	.24	.32				.50	.24	.52							.04				.22	.02		.12	2.97
Blandville	Mississippi							.67	.03	T.	T.			.20		.13	.47						.06					.05	.31	.09	.48	2.49
Bowling Green ‖	Green							.05	.90							T.								.03					.02		.32	1.32
Burnside ‖	Cumberland								.58	.05	.06	T.				.15	.26	.22							.02			.02	T.		.10	1.46
Calhoun	Green							.02	1.09	T.	T.			.25	.50	.59	.98	.01						.03		.09	.31	.03	.03	.38	4.31
Catlettsburg ‖	Big Sandy								.48	.36	.46	T.			.42	.32	1.28	.12							T.		.14	.52	.14	.04	4.28
Earlington ‖	Green								.75	T.					.24	.07	.48												.15	.06	.21	1.96
Edmonton	do							.15	.99	.04	T.				T.	T.	.49						.06				.06			.50	2.29
Eubank ‖	Cumberland									.13	.12					.43	.43										.15				1.26
Falmouth ‖	Licking								1.17	.05	.25	T.			.45	.85	1.57										T.	.60	.02	.09	.05	5.10
Farmers	do							.55	.62	.03				.25	.60	.65											.05	.35	.20		.05	3.35
Frankfort ‖	Kentucky				T.				1.71	.04	.06	T.			.09	1.08	1.58							.04			T.	.08	.21	.01	.07	4.97
Franklin	Green									T.	T.				T.		.50											.10		T.	.23	0.83
Greensburg ‖	do							.04	.74	.02	T.					1.50	.40	.08						.08				.15	.05		.12	3.18
Hazard ‖	Kentucky							.49	.03	.09	.02			T.	.41	.25	.50							T.			.08	.18			1.10	3.15
High Bridge ‖	do								.54	.03	.05	T.			.39	.66	.77	.09										.15	.12		.03	2.83
Hopkinsville	Cumberland							.20	.60					.12			.40													.10	.50	1.92
Irvington	Ohio							.25	.65	T.	T.			.07	1.07	.64	1.20							T.			T.	.52	T.		.25	4.65
Leitchfield	Green							.92		T.	T.			.25	1.11	*	.62										T.	T.	T.	*	1.10	4.00
Lexington	Kentucky							.52	.22	.23	T.			.42	.68	.74	.58							.01			T.	.28	T.	T.	.32	4.00
Loretto	Salt							.25	.80	T.				.30	.41	.27	.72	T.						T.				.21	.02	.70	.13	3.81
Louisa ‖	Big Sandy								.45	.50					.26	.62	1.50	.50						.04				.10	.58			4.55
Louisville (1)	Ohio							.76	.04	T.	T.			.19	.81	1.02	.57						.01	.02			.01	.21	.02	.02	.64	4.32
Louisville (2)	do							.15	.44	.04	T.			.35	.14	.87	1.50							.05			T.	.23		.05	.58	4.40
Manchester ‖	Kentucky								.66		.03					.17	.50								.02				.08		.22	1.68
Maysville ‖	do								1.00	.03	.30	T.			.08	.39	1.97											.11	.48	.03	.05	4.44
Middlesboro	Cumberland								.55	.05	.05						.55														.64	1.84
Mount Sterling ‖	Licking								.70	.10	.20	T.			.45	.99	1.20	.09					T.	T.				.14	.28			4.15
Owensboro ‖	Ohio								.52	.12					.62	2.20	1.60							T.		.58	.04			.12	.32	6.12
Paducah ‖	do								.20						.22	T.		.80						T.					.60	.10	.30	2.22
Pikeville ‖	Big Sandy								.30	.40	.10	T.				.20	.10	.40							.06			T.	.10			1.66
Richmond ‖	Kentucky								.76	.10	.05	T.			.46	.50	.70	.10						T.	.03			.14	.06		T.	2.90
St. John ‖	Salt								.85	T.	T.	T.		T.	.20	.92	.96										.20	.14	T.	.17	3.44
Scott	Licking			T.				.28	.50	.05	.05			T.	.53	.98	.77							.09		T.	.17	.03	.41	.20	.23	4.29
Shelby City	Kentucky							.05	.65	.12				.03	.38	.25	.56							T.				.18			.18	2.40
Shelbyville ‖	Salt									.98	T.				3.15									.07				T.	.36	T.	.22	4.78
Taylorsville	do							.55	.40	.05	T.	T.		.14	.78	.36	1.82							.02		.05	.16	.03	.02	.27	4.65
Weeksbury	Big Sandy								.56	.42	.12	T.			.27	.04	.90							.06	.01		T.	.04			.06	2.48
Williamsburg ‖	Cumberland								.45	.10	.05						.20	.38													.05	1.23
Williamstown ‖	Licking								.95	T.	T.				.22	.80	1.53							T.				.07	.49	.08	.04	4.18
Tennessee.																																
Ashwood	Tennessee							.10	.25								.15														.41	0.91
Benton	do								.45	T.	T.						.10								.05					.05	.10	0.75
Bird's Bridge ‖	do								.58	.35	.04							.59													.05	1.61
Bluff City ‖	do								.35	.68	.36							.54														1.93
Byrdstown	Cumberland								.83	.15							.70														.18	1.86
Carthage ‖	do								.96	.09							.32	.12											T.		.33	1.82

TABLE 2.—*Daily precipitation for November, 1913. District No. 3*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Tennessee—Contd.																																
Cedar Hill	Cumberland							.25	.55	T.	T.						.60							T.				.05		.08	.26	1.79
Celina ‖	do								.83	T.	T.						.40	.06													.14	1.43
Charleston ‖	Tennessee								.37	T.								.07						T.							.13	0.57
Chattanooga	do								.34	.03							.09													.16	1.79	2.41
Clarksville	Cumberland							.37	.56	T.	T.						.51											T.	T.	.04	.33	1.81
Clinton ‖	Tennessee								1.00	T.	.10	.10	T.					.21													.02	1.43
Crossville	do							T.	.46	.07							.45	T.											.20		.25	1.43
Dandridge ‖	do								.56	.04	.08						.12	.32														1.12
Decatur	do								.85	.03	T.						.08							T.	T.					.08	.18	1.22
Dickson	Cumberland								.60								.93													.05	.47	2.05
Dover	do							.82	T.	T.							.56											T.	T.	T.	.61	1.99
Elizabethton ‖	Tennessee								.54	.90	.01						.20	.40														2.05
Erasmus	Cumberland							T.	.74	.18	T.			T.			.51							T.						.12	.15	1.70
Florence	do							.01	.67	T.							.22							T.						T.	.42	1.32
Franklin	do							T.	1.45								.23							T.							.42	2.10
Hall's Hill ‖	do								.92	T.	.04						.12	.13													.35	1.56
Hohenwald	Tennessee							.06	.27								.27														.65	1.25
Iron City	do							T.	T.								.27													.02	.57	0.86
Jefferson City	do								.45	T.	T.						.47														.10	1.02
Johnson City ‖	do								.55	1.00	.20							.50							T.						2.25
Johnsonville ‖	do							.15	.63	.01					T.		.31	.05						T.						.09	.36	1.60
Kingston ‖	do								.90	T.	T.	T.					T.	.20							T.						.04	1.14
Knoxville	do							T.	.50	.01	T.						.16							T.						.03	.41	1.11
Lebanon	Cumberland							T.	1.00	T.	T.						.41													.08	.30	1.79
Lewisburg	Tennessee							.01	.46	.04							.19							T.						.04	.56	1.30
Liberty ‖	Cumberland								.75	.05	T.						.05	.25													.60	1.70
Loudon ‖	Tennessee								.70	T.								.26													T.	0.96
Lynnville	do							T.	.56	T.							.19													.08	.51	1.34
McGhee ‖	do								.44	.08	T.							.25							T.						T.	0.77
McMinnville	Cumberland								.61	.03	T.						.17														.35	1.16
Mountain City	Tennessee								.62	.05	.05						.60	.12													.20	1.64
Nashville	Cumberland							.89	.05	T.	T.						.25											T.		.02	.63	1.84
Newport ‖	Tennessee								.45	.32	.02						T.	.40							T.							1.19
New River ‖	Cumberland								.63	.12	.19						.14	.33													.13	1.54
Palmetto	Tennessee							T.	.57	T.					T.		.13													.17	.35	1.22
Perryville	do							.07	.37								.38													.12	.53	1.47
Pinewood	do							.39	.85	T.	T.						.29													T.	.95	2.48
Rogersville ‖	do								.45	.06	.01							.44							.02						.02	1.00
Rugby	Cumberland								.58	.40	.20						.65														.75	2.58
Savannah	Tennessee							.10	.90								.43													.05	.46	1.94
Sevierville	do								.63	.02							.38														.08	1.11
Sewanee	do								.11	.20							.43														.39	1.13
Sparta	Cumberland	.05						T.	.60	.20	T.						.10							T.						.05	.70	1.70
Springville	Tennessee							.25	.10	T.				.02			.35													.05	.21	0.98
Tazewell ‖	do								.88	T.	.15	T.					T.	.28							T.						T.	1.31
Tullahoma	do								.60	.08	T.						.25													.05	.44	1.42
Walling ‖	Cumberland								.60	.04					.12	T.															.30	1.06
Waynesboro	Tennessee							T.	1.26	T.					T.		.50												T.		.49	2.25
Wildersville	do								.11								.16													T.	.10	0.37
Worsham ‖	Cumberland							.30	1.11	T.						.45															.60	2.46
Yukon	Tennessee							.06	.40								.35													.05	.58	1.44
Alabama.																																
Bridgeport ‖	Tennessee								1.00	.01	.01							.28													.60	1.90
Decatur	do								.36									.34													.53	1.23
Florence	do							.06	.02								.18							T.						.10	.55	0.91
Guntersville ‖	do			T.					.22	T.								.40													.75	1.37
Madison	do							.73																							.55	1.28
Riverton	do							.08	.03								.14	.35												T.	.84	1.44
Scottsboro ‖	do								.19	T.							.24													.12	1.13	1.68
Tuscumbia ‖	do								.18									.12													.64	0.94
Georgia.																																
Mineral Bluff	Tennessee								.08							.03									.01					.01		0.13
North Carolina.																																
Altapass	Tennessee				T.					*	1.90						T.														.60	2.50
Andrews	do								1.06	.09							.55														.24	1.94
Asheville	do								.39	T.	.01	T.					.10													.05	.26	0.81
Banners Elk	do								.70	.40							.83								.07							2.00
Blantyre	do								.74																						.43	1.17
Blowing Rock	Great Kanawha								.86		.10																				.52	1.48
Bryson City ‖	Tennessee								.88	.06	.03	.02						.41													.21	1.61
Cane River	do								.70	*	.50						.19	.14													.21	1.74
Cullowhee	do								.47	.30	.10							.04													.29	1.20
Highlands	do								.90	.05	.10																				1.06	2.11
Hot Springs	do								.77	.44	.15						.49														.11	1.96
Jefferson	Great Kanawha								.40	1.13	.05						.31	.16										T.			.25	2.30
Marshall ‖	Tennessee								.41	.27	.05	T.						.30														1.03
Murphy ‖	do								.74	.06	.10						.52														.09	1.51
Rock House	Savannah								1.25	.03	.01						.02													.13	.68	2.12
Transon	Great Kanawha								.40	.85							T.	.30														1.55
Waynesville ‖	Tennessee								.57	.21	.10	.10						.15													.15	1.28
Virginia.																																
Blacksburg	Kanawha								1.05	.78	T.	T.																.01			0.25	2.37
Burkes Garden	Tennessee								.65	.40	T.						1.14														T.	2.19
Elk Knob	do								.79	.20	.10						.45														.03	1.57
Emory	do								.65	.10	.10						.48															1.33
Ivanhoe ‖	Kanawha									1.04	.20							.25												T.	T.	1.49
Max Meadows	do								.32	.68	T.	T.			T.		.28											T.			.12	1.30
Mendota ‖	Tennessee								.45	.27	.47							.48														1.67
Mountain Lake	Kanawha								1.50	.60						.20	.40															2.70
Radford ‖	do									.86								.60														1.46
Speers Ferry ‖	Tennessee								.46	.24	.20	T.						.60														1.50
Wytheville	Kanawha									.67	.24	.01					.41														.19	1.52

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 5, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.														Ohio.							
	Greenville.		Pittsburgh.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.§§		Morgantown.		Parkersburg.		Wheeling.§§		Canton.		Cincinnati.		Columbus.		Dayton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	47	28	43	28	48	30	47	23	42	21	54	21	42	28	45	23	48	24	48	28	46	24	48	30	45	28	45	26
2....	48	25	49	31	60	27	58	23	54	19	60	19	51	25	51	23	53	24	53	23	50	24	56	29	49	28	50	28
3....	59	24	59	33	65	28	65	28	64	22	70	22	63	28	61	28	60	29	62	26	57	29	61	36	58	35	58	37
4....	52	33	52	37	65	49	60	39	57	31	64	40	59	32	57	44	57	40	63	28	53	33	57	39	56	35	54	36
5....	56	23	52	32	61	34	62	29	60	24	64	24	56	31	53	26	55	32	59	28	53	24	57	35	54	31	56	29
6....	65	20	67	33	69	36	69	39	69	21	72	22	68	30	68	30	69	32	67	28	66	27	69	37	66	34	64	36
7....	67	33	68	48	74	43	70	44	70	29	78	30	71	32	72	44	72	40	70	29	68	46	63	52	65	49	60	51
8....	55	46	61	41	72	51	68	41	56	42	65	35	59	42	65	48	59	40	55	35	55	40	53	34	55	34	51	31
9....	49	31	41	23	55	28	60	33	42	22	54	26	33	32	51	24	40	27	34	32	40	24	34	28	34	25	31	26
10....	35	21	26	21	32	28	55	24	25	20	30	23	31	28	26	24	31	26	29	24	26	21	31	26	27	24	28	22
11....	29	21	30	21	35	23	37	20	24	18	33	21	36	20	27	21	33	19	31	25	32	22	37	22	33	22	34	20
12....	40	16	48	22	55	24	51	20	53	6	48	7	57	21	49	21	54	16	50	15	45	18	65	29	53	20	60	28
13....	46	34	55	46	68	42	66	43	57	37	60	20	63	23	54	47	59	53	54	17	52	43	61	55	61	51	61	54
14....	48	35	51	37	60	50	65	50	52	40	53	45	57	51	54	41	56	41	53	46	48	30	61	45	53	39	55	42
15....	49	24	41	34	55	47	64	52	52	37	52	43	56	46	46	33	44	38	40	34	36	29	52	42	42	36	44	37
16....	43	31	39	36	58	53	64	48	54	36	54	44	50	44	48	37	45	38	43	35	43	29	47	41	43	35	45	37
17....	49	28	48	34	53	40	56	40	48	31	53	30	50	42	49	34	51	30	49	30	44	26	51	43	46	30	47	35
18....	54	31	55	37	63	38	63	33	55	27	57	30	61	33	55	39	55	35	59	30	50	36	66	44	62	37	63	42
19....	64	38	69	54	74	47	71	44	70	48	70	50	71	39	79	55	73	53	73	37	65	49	71	54	68	50	67	52
20....	60	56	64	58	75	48	65	42	63	46	68	45	71	45	65	57	71	54	68	51	65	56	72	59	73	56	70	57
21....	64	49	72	54	72	48	71	44	73	40	70	37	69	42	71	49	69	47	73	44	69	50	73	52	67	52	68	53
22....	72	54	70	57	75	47	62	45	73	37	68	45	74	41	72	50	74	52	70	44	71	54	76	60	73	56	72	58
23....	63	41	65	39	75	52	60	35	63	33	68	44	62	48	65	46	66	41	61	53	61	35	63	42	62	37	61	36
24....	46	29	45	34	57	35	51	27	46	30	58	25	52	35	46	30	51	35	54	30	48	30	56	39	49	34	52	35
25....	48	24	46	32	53	30	60	36	49	23	54	21	50	27	47	32	50	26	48	26	46	25	53	35	47	31	49	30
26....	44	37	44	40	55	40	60	46	51	33	68	44	53	27	47	37	47	42	44	27	43	41	52	44	46	41	47	41
27....	43	39	48	42	56	52	61	45	51	43	56	35	53	45	48	42	51	44	48	40	45	41	53	49	49	43	54	45
28....	42	37	50	44	65	53	60	42	50	43	54	33	62	48	49	44	55	48	49	44	46	41	59	52	51	46	59	47
29....	51	39	52	48	65	48	58	43	60	38	52	35	59	47	56	44	56	47	51	47	49	45	60	53	57	51	61	53
30....	55	44	53	48	65	53	59	41	56	43	53	37	65	48	55	47	64	50	63	49	59	46	59	55	61	52	59	56
Mns..	51.4	33.0	52.1	38.1	61.2	40.8	60.6	37.3	54.6	31.3	58.7	31.8	56.8	36.0	54.4	37.3	55.6	37.4	54.0	33.5	51.0	34.6	52.2	42.0	53.5	38.1	54.2	39.3

Date.	Ohio.				Indiana.										Philo, Ill.		Kentucky.									
	Marion.		Waverly.§§		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.				Beattyville.§§		Bowling Green.§§		Earlington.§§		Greensburg.§§		Lexington.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	46	22	50	20	50	23	48	30	44	28	43	20	46	19	45	22	42	19	57	22	53	21	56	21	52	20	46	31
2....	54	23	55	18	59	24	57	33	53	31	54	23	54	25	54	26	53	24	64	13	60	22	63	23	60	22	54	32
3....	58	32	63	24	62	36	65	47	61	42	59	38	63	40	63	38	59	41	70	25	69	26	65	40	69	31	62	40
4....	58	34	59	41	59	35	59	42	52	37	56	30	60	33	58	35	52	29	67	28	65	35	66	32	66	34	56	40
5....	60	23	57	25	67	30	56	37	56	32	57	22	59	29	57	30	55	29	65	23	65	31	68	31	64	28	56	33
6....	68	29	71	25	68	35	68	39	64	37	52	28	64	34	64	29	62	27	76	26	71	35	75	45	75	32	69	44
7....	68	48	70	36	60	52	62	52	61	50	62	47	62	52	61	48	65	46	71	29	64	48	71	36	67	37	59	50
8....	54	41	55	35	55	35	52	33	51	29	56	31	55	33	58	35	52	31	57	37	60	42	46	39	57	46	50	32
9....	41	23	46	27	35	27	35	30	30	27	33	25	35	26	47	27	32	26	31	29	37	31	35	31	32	29	32	25
10....	27	22	32	26	35	23	34	27	29	22	29	20	31	23	31	25	30	17	31	25	40	18	38	29	34	29	29	23
11....	38	21	38	17	40	15	44	26	37	20	36	15	38	15	40	16	39	12	43	13	47	22	51	19	45	15	36	19
12....	47	19	61	16	67	28	69	37	64	30	59	26	65	30	66	29	64	30	69	17	55	25	71	27	68	20	63	29
13....	58	38	59	47	63	51	62	56	63	49	60	51	67	56	65	57	66	51	71	20	66	35	65	45	68	35	59	52
14....	57	40	59	48	62	47	62	48	49	43	59	40	60	42	59	47	51	41	56	51	65	42	65	55	63	58	59	47
15....	57	32	50	38	58	46	62	51	48	39	49	34	49	40	55	45	42	39	70	46	72	53	70	51	70	50	67	46
16....	45	34	47	39	57	43	51	42	43	37	42	34	44	37	52	40	42	35	57	47	50	44	55	55	56	50	57	43
17....	45	26	50	30	52	40	58	42	47	39	49	34	54	36	53	36	56	32	60	41	68	40	65	43	60	43	52	40
18....	58	36	63	32	68	42	66	51	64	47	63	40	66	47	64	46	66	52	70	35	66	38	71	43	71	36	65	42
19....	65	51	73	43	73	51	72	56	67	55	63	56	67	56	69	54	65	57	75	36	73	40	76	52	75	40	70	50
20....	72	55	74	56	74	58	75	58	72	59	69	57	74	57	73	58	70	57	80	39	75	44	78	58	77	41	72	55
21....	68	52	71	40	72	51	72	55	70	54	71	54	73	55	70	55	71	58	75	34	75	46	78	57	75	41	70	50
22....	74	53	76	51	76	58	74	61	73	59	70	55	72	58	75	60	71	59	81	36	77	47	77	55	72	31	72	55
23....	73	43	67	48	66	45	65	43	61	38	68	40	66	42	71	45	61	37	60	43	77	45	78	54	60	54	61	40
24....	50	32	55	28	56	33	55	39	52	37	51	31	56	33	57	32	53	30	38	25	59	30	76	29	55	27	51	34
25....	46	24	51	22	56	29	55	40	49	36	49	25	49	31	50	32	48	30	60	19	59	30	56	52	59	26	52	35
26....	44	39	48	41	52	42	58	47	47	42	48	40	47	41	51	44	48	41	65	21	62	43	61	35	63	30	56	48
27....	47	42	51	45	52	47	58	51	52	47	50	43	56	46	54	48	55	47	54	39	60	45	62	54	59	46	54	50
28....	50	42	57	49	62	51	61	57	58	49	55	46	61	48	58	51	61	51	69	46	70	48	67	49	69	50	65	53
29....	58	48	55	45	68	53	64	57	60	54	58	52	60	55	61	56	59	55	70	44	66	49	64	58	66	51	64	54
30....	60	52	63	49	64	55	62	53	59	54	59	55	61	55	61	57	60	55	64	46	64	53	63	58	64	55	61	55
Mns..	54.9	35.9	57.5	35.4	57.6	40.2	59.3	44.7	54.5	40.8	54.3	37.1	57.1	39.8	58.1	40.8	55.0	38.6	62.5	31.8	63.0	37.6	64.4	42.5	62.4	37.6	57.3	41.6

TABLE 3.—*Maximum and minimum temperatures for November, 1913. District No. 3*—Continued.

Date.	Kentucky.						Tennessee.														Decatur, Ala.§§		Ashville, N. C.		Virginia.			
	Louisville.		Maysville.§§		Williamsburg.§§		Chattanooga.		Johnson City.§§		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynesboro.						Blacksburg.		Wytheville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	48	31	54	24	45	24	54	35	57	24	51	30	52	28	55	24	66	53	56	25	56	31	52	23	58	18	51	30
2....	56	32	60	24	50	27	59	30	63	22	59	28	60	32	65	28	60	25	61	29	60	31	62	24	60	20	60	21
3....	64	42	64	24	65	26	68	38	67	29	66	35	69	43	70	38	68	36	69	35	67	39	68	32	66	23	64	26
4....	60	42	61	32	68	21	69	43	66	30	68	37	67	43	63	40	71	41	69	37	68	42	64	36	62	34	63	37
5....	58	36	53	27	68	25	70	45	70	31	66	38	65	38	69	31	69	29	71	31	72	40	63	32	62	23	59	28
6....	69	41	75	27	69	38	68	46	70	32	68	39	71	42	72	43	71	37	72	40	75	41	65	32	65	22	63	25
7....	60	51	67	30	71	37	70	53	76	31	72	44	68	52	69	50	70	53	71	53	76	53	68	32	68	25	68	29
8....	51	33	50	43	60	35	63	38	55	40	55	38	53	35	61	42	65	40	66	36	55	54	54	36	50	34	53	37
9....	33	28	33	31	55	30	38	31	32	31	38	28	35	28	42	28	40	29	40	31	40	34	36	23	45	24	37	24
10....	31	25	34	26	31	26	39	28	31	25	35	27	36	28	47	24	33	25	40	26	46	28	31	21	27	21	27	21
11....	40	23	42	17	42	15	49	22	40	21	42	22	47	23	50	17	42	15	52	18	49	22	34	21	27	19	32	21
12....	66	32	66	17	68	17	63	28	70	20	62	26	68	33	67	30	67	23	71	30	68	22	61	23	57	21	53	24
13....	61	51	58	22	70	39	71	39	72	24	69	36	72	53	70	50	70	34	73	50	70	31	71	29	67	32	63	33
14....	62	48	56	50	71	42	67	43	68	33	68	50	70	57	66	50	73	38	68	51	69	40	67	37	64	41	57	50
15....	66	48	59	42	72	48	73	47	74	40	70	50	72	57	72	50	73	40	72	50	73	41	68	45	55	41	56	43
16....	55	44	48	43	68	45	63	50	59	46	59	50	65	46	62	47	62	46	64	49	63	45	60	46	56	40	55	41
17....	54	40	51	41	65	13	62	46	60	39	58	43	59	45	63	40	60	44	65	43	61	47	59	41	56	34	55	36
18....	66	49	66	32	70	33	68	38	70	31	67	36	70	41	71	36	73	34	72	38	71	38	67	31	65	30	61	35
19....	72	57	75	43	75	49	72	41	70	32	70	42	72	50	73	48	72	35	71	40	72	39	73	38	76	32	71	42
20....	74	61	79	48	70	50	72	42	70	38	70	40	74	52	72	49	75	36	72	45	72	40	72	39	68	40	68	42
21....	73	53	74	40	71	43	72	44	70	37	71	40	74	49	74	48	78	42	73	46	74	42	71	36	73	34	72	35
22....	74	62	80	45	68	42	74	45	70	36	72	45	73	56	77	56	71	40	74	45	76	46	70	39	74	32	73	38
23....	65	42	61	53	60	29	75	48	65	35	70	45	66	44	71	50	69	47	74	52	76	52	68	41	66	35	66	42
24....	56	39	58	30	68	28	60	43	56	35	57	40	60	38	69	32	57	30	65	28	61	48	58	41	52	30	48	34
25....	54	36	58	25	70	37	60	41	59	27	56	34	57	40	64	29	63	30	62	30	65	38	61	33	55	25	56	30
26....	56	51	50	26	71	38	63	43	59	28	61	39	67	53	67	46	66	42	66	46	68	37	62	37	61	29	56	33
27....	57	51	52	45	70	43	68	45	63	38	63	41	64	51	71	49	65	40	69	47	70	45	65	39	50	36	52	43
28....	65	54	67	45	68	43	67	45	60	40	63	43	70	50	70	53	69	40	67	48	72	50	61	43	49	40	49	39
29....	66	57	61	49	65	40	61	55	60	38	67	45	64	58	65	56	65	51	69	51	63	53	66	39	51	41	60	38
30....	61	54	63	49	62	38	61	53	58	38	60	51	66	58	67	58	65	58	68	48	69	60	55	44	49	39	47	40
Mn...	59.1	43.8	59.2	35.0	64.2	34.0	64.0	41.5	62.0	32.4	61.8	38.7	63.5	44.1	65.8	41.4	64.9	37.8	66.1	39.9	65.9	41.0	61.1	34.4	57.5	30.5	56.5	33.6

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 4, THE LAKE REGION.

J. H. ARMINGTON, Acting District Editor.

GENERAL SUMMARY.

The main features of interest in the weather of November, 1913, were the high mean temperatures of the month and the great storm which swept the district during the 7th–10th. The latter half of the period was very much warmer than usual, mild south to southwest winds prevailing during a large portion of the time, with humid atmosphere, much cloudiness, and extensive fogs. The latter were in many instances of the densest character, and seriously interrupted navigation at several points on the Great Lakes, and occasioned a few accidents to vessels. Sunshine over the western portions of the district was quite deficient; but in the eastern sections, while there was as a rule even less sunshine in actual amount, the mean for the month exceeded the average for those regions by from 5 to 15 per cent.

The following table summarizes most of the chief features of interest in the various portions of the district:

Portions of States.	Mean temperature.	Departure from normal.	Mean daily range.	Mean precipitation.	Departure from normal.	Greatest precipitation in 24 hours.	Mean snowfall.	Number of days—				Prevailing wind direction.
								With 0.01 inch or more precipitation.	Clear.	Partly cloudy.	Cloudy.	
Minnesota	36.1	+6.8	15.7	0.47	−1.01	0.56	T.	5	9	10	11	sw.
Wisconsin	39.5	+5.9	13.6	1.57	−0.26	1.53	1.5	7	11	6	13	sw.
Illinois	47.2	+7.9	11.9	1.47	−1.03	0.58	T.	10	9	5	16	sw.
Indiana	45.3	+6.2	13.7	2.14	−0.76	1.03	2.4	11	9	6	15	sw.
U. Michigan	37.2	+5.7	13.2	2.00	−0.38	2.00	7.1	8	9	6	15	sw.
L. Michigan	41.5	+4.6	14.0	2.03	−0.40	1.85	3.9	8	8	7	15	sw.
Ohio	44.1	+4.0	13.5	3.03	+0.37	2.24	12.3	12	9	6	15	sw.
Pennsylvania	45.7	+4.6	11.4	4.18	+0.57	1.27	19.3	15	3	9	18	s.
New York	40.4	+5.2	13.8	2.87	−0.16	2.58	3.1	11	8	8	14	sw.
Vermont	39.0	+4.9	17.1	1.32	−1.93	0.75	4.0	8	9	8	13	s.

TEMPERATURE.

In the Lake Region there have been but few Novembers warmer than that of 1913. Mean temperatures everywhere exceeded the normal, some stations experiencing excesses of from 6° to 10°, and at no station was the average departure less than +1.4°. The averages in the various sections of the district ranged from 4° to 7° above the seasonal normal. The absolute range in temperature was 81°, from 80°, at Keene Valley, N. Y., on the 6th, to −1°, at Humboldt, Mich., on the 15th.

The first half of the month was a period of variable temperatures, alternating first below and then above the seasonal average. The severest weather of the month occurred in the wake of the storm of the 7th–10th, but even the lowest readings of the thermometer were comparatively high for this time of year; and the district minimum, −1°, was only 4° lower than that of the preceding month. The last 15 days were marked by exceptionally high temperature, especially during the 19th–22d, when daily readings of from 20° to 30° above the normal were common in all portions of the district. Considering the lateness of the season, this warm spell is quite remarkable, and to it is due in a large measure the high mean temperatures for the month as a whole.

PRECIPITATION.

Precipitation averaged below normal in amount, except in the sections to the southward of the Lower Lakes, where there was a slight excess. In the Champlain Valley there was a deficiency of nearly 2 inches, and to the westward of Lake Michigan the shortage for the month was somewhat more than 1 inch. The distribution in most portions of the district was fairly even in point of time, but to the south of Lake Erie the greater proportion of the monthly totals occurred on the 9th-10th.

Snow.—Heavy and driving snows occurred over northeastern Ohio and western New York on the 9th–10th, during the storm referred to above. The fall was unprecedented for the season, and drifted badly owing to the high winds which prevailed, delaying traffic considerably, and causing great damage to all kinds of communication and transportation services. During this time heavy snow also occurred over portions of northern Indiana, and in lower Michigan, with similar delays and damage, but of generally lesser degree. In the extreme western portions of the district there was but little snow at any time during the month. In no case did the fall remain on the ground for any length of time except in the higher lands of the eastern portions.

ICE CONDITIONS.

Owing to the unusually high temperatures, ice in rivers and harbors occurred only in inconsequent amounts in the extreme northern portions of the Lake Region, and there was practically none at any place at the close of the period.

STORM OF NOVEMBER 7–10.

The storm of the 7th to 10th was one of the severest that has ever crossed the Lake Region. While higher winds have been recorded in connection with other disturbances, the velocities experienced in this storm were at most stations far above the verifying limits for windstorms, and they continued so long as to cause extraordinarily high seas which swept the Lakes with tremendous force. Many disasters and casualties occurred as a result of the storm. Breakwaters were broken up, and banks on the windward shores were badly washed out. The disturbance was accompanied over the central and eastern portions of the lakes by driving snow, which increased the precarious situation of vessels, tied up land traffic, and caused much damage to a considerable distance from the shore.

Owing to the exceptional severity of this storm, reports of various Weather Bureau officials relative to it are given in considerable detail:

Duluth, Minn.—There was no loss of life or vessel property on the extreme western end of Lake Superior as a result of the great storm which passed over the Lake Region on the 7th to 10th, but some local damage occurred to property ashore in sections near the Duluth-Superior harbor during the northwest gale which prevailed on the afternoon and evening of the 7th. During this storm the maximum velocities ranged anywhere from 34 to 62 miles between 1 p. m. and 7 p. m., its intensity being greatest about 7 p. m. and ceasing abruptly a few minutes after the latter hour. This was the only blow of any consequence during the month.—H. W. Richardson, Duluth, Minn.

Sault Ste. Marie, Mich.—The storm of the 7th to 10th was the most severe experienced on the lakes for many years. A large fleet anchored in the upper river and the lower part of White Fish Bay. The wind and sea sweeping down the bay, into the river, caused the steamers *J. C. Hutchinson* and *Fred G. Hartwell* to drag their anchors and strike rock shoals, sinking both vessels and causing very heavy damage. The steamer *William Nottingham* struck a shoal near White Fish Point and was very badly damaged. Three of the crew were drowned while trying to reach shore in a small boat. The steamer *Cornell* was in the gale above White Fish Point from Friday morning until Monday night. She sustained very heavy damage and was kept off the beach only with the greatest difficulty. Other disasters occurred farther up the lake. While the wind at this station reached a maximum velocity of only 37 NW. at 6.55 p. m. on the 9th, vesselmasters report that on the open lake it was 60 to 80 miles per hour. A very peculiar feature was reported by Capt. Noble, steamer *Cornell*. About midnight of Thursday, the 6th, while on the course from White Fish Point to Keweenaw, and about 50 miles west of the point, with the wind light from the southeast, he suddenly encountered an unusually high northwest sea, and shortly afterward the wind backed to northerly, blowing a gale, which lasted until Monday night. The Canadian steamer *Leafield*, loaded with steel rails, for Port Arthur, has not been heard from since leaving Sault Ste. Marie, Ontario. The fine steel steamer *Henry B. Smith* left Marquette Sunday evening, the 9th, and has never been heard of. The steel steamer *L. C. Waldo* was driven on Manitou Island and will probably prove a total loss. The Canadian steamer *Turret Chief* was driven on Keweenaw Point and will probably prove a total loss. The crews of the *Waldo* and *Turret Chief* suffered great hardships before being rescued. Gales reaching a velocity of 46 to 48 miles on the 23d and 24th caused vessels to remain in shelter.—Alexander G. Burns. Sault Ste. Marie, Mich.

The storm on Lake Huron on November 9, 1913.—The storm of November 9 will be entered in the history of navigation as one of the most violent and one that exacted a greater toll of life and property on Lake Huron than any other storm within memory of local navigators. After its fury had subsided, it was found that 8 boats were missing, some of which ranked with the best on the lakes, and with them went down 200 lives. Ten boats were stranded, of which 2 were abandoned as total loss, while the others were released in more or less damaged condition. The greatest casualties occurred on the southern part of the lake, presumably within a hundred miles of Port Huron. Here 9 out of the 10 boats were stranded, and all the 8 missing boats are supposed to have foundered. Most of the stranded boats were found near the entrance to Saginaw Bay, between Port Austin and Harbor Beach, Mich.

The survivors' accounts of the storm and of their struggle to keep their vessels afloat are almost heart-rending. The water, they claim, was simply a seething mass, such as they have never seen before. So helplessly were they tossed about by the waves and carried by the currents that most of them did not know where they were. Some of those that were stranded near Saginaw Bay felt absolutely sure before striking ground that they were at least 10 to 15 miles from the shore, others again were under the impression that they were near the middle of the lake, somewhere opposite Sturgeon Point.

The story of the struggle of the 8 vessels that were lost in Lake Huron will never be known, neither are the places known where 7 of them foundered. The bodies of some of the crews, as well as considerable wreckage, were washed ashore on the Canadian side of the lake, all along between Kincardine and Kettle Point, so the natural supposition is that the boats were lost in the lower half of the lake.

One of the foundered boats, the *Charles S. Price*, was discovered 11 miles north of Port Huron and 7 miles offshore completely turned over. Her hull protruded about 20 feet above the water when she was first discovered, evidently buoyed up by the imprisoned air that was bubbling up all around her. She settled gradually and disappeared under the water on the 17th of November. Some of the bodies were washed ashore near Goderich, Ontario, about 55 miles northeast from where she sank.

TABLE I.—*Casualties on Lake Huron during storm of November 9, 1913.*

STEAMERS FOUNDERED.

Name.	Lives lost.	Value of steamer.	Value of cargo.
Charles S. Price	28	$325,583	$21,768
John A. McGean	23	225,000	18,000
Isaac M. Scott	28	325,158	21,961
Argus	24	155,000	30,000
Hydrus	23	155,000	20,000
Regina	22	[1]100,000	.....
Wexford	22	[1]80,000	.....
James Carruthers	30	[1]375,000	.....
Total	200	1,740,741	111,729

[1]Approximate value.

STEAMERS STRANDED.

Name.	Location.	Value of steamer.	Value of cargo lost.	Remarks.
Mathew Andrews	Port Edward	.....	None	Released.
H. B. Hawgood	do	.....	None	Do.
D. O. Mills	Harbor Beach	.....	.....	Do.
Rhoda Emily	do	.....	.....	Do.
Edward Buckly	do	.....	.....	Do.
Northern Queen	Kettle Point	.....	.....	Do.
J. M. Jenks	Midland	.....	.....	Do.
Arcadian	Alpena	.....	.....	Do.
Matoa	Point aux Barques	$123,600	$7,000	Abandoned.
Howard M. Hanna, jr.	Port Austin	325,000	20,000	Do.

The storm began on this part of the lake about 6 a. m. of the 9th, when the wind became brisk northwest. The first verifying velocity (36 miles) occurred at 9.50 a. m., and from that time to 1.30 p. m. the wind increased very little but fluctuated between 20 and 42 miles per hour. About 1.30 p. m. it shifted to the north, and increased steadily until it attained an extreme velocity of 62 miles per hour, at 9.02 p. m. A comparison with the wind record from Harbor Beach, Mich., near the entrance to Saginaw Bay, shows that the wind was nearly the same in that part of the lake also. The highest and steadiest winds occurred between 6 and 10 p. m., and that was the time when most of the accidents occurred. Even the watches that were found on the dead bodies were stopped between 8 and 11.30, and probably indicated the time when the boats went to pieces and the sailors entered their watery graves.

TABLE II.—*Hourly maximum wind velocities at Port Huron, Mich.*

Hours.	Velocity.	Hours.	Velocity.
November 9, p. m.:	*Miles.*	November 9, p. m.—Continued.	*Miles.*
1-2	40	9-10	56
2-3	40	10-11	50
3-4	46	11-12	46
4-5	47	November 10, a. m.:	
5-6	52	12-1	45
6-7	56	1-2	42
7-8	58	2-3	40
8-9	56	3-4	38

The station barometer began to fall about 2 a. m. of the 9th, when it stood near 29.70 inches sea level, and reached the lowest point, 28.95 sea level, at 8 p. m. During the fall the wind was strong from the northwest and north, indicating that the storm was increasing in energy, as its center was already east of the station.

The damage on land and along the shore, although considerable and will probably total over $100,000 in Port Huron alone, appears insignificant when compared with the losses on the open lake. Telegraph and telephone communication was crippled for several days. Trains and electric cars were stalled by the blinding snowstorm, which piled up the snow in drifts 4 to 5 feet high. A few store windows were smashed in, and several houses were unroofed. The water rose 4 to 5 feet above normal height at the foot of the lake and in St. Clair River, and caused considerable damage to shops and dock property along the water front. The Fort Gratiot lighthouse at the foot of the lake was badly undermined by the action of the waves, and the lightship, about 2 miles farther up in the lake, was torn loose from her anchorage and dragged with its occupants to the Canadian shore.—A. Wiesner, Port Huron, Mich.

At Cleveland, Ohio.—The unusual character and severity, in some respects, of the storm, together with the attendant appalling losses, were such as to warrant the prediction that it will go down in local history and be referred to for years to come as the "Great storm of November, 1913." For this reason a detailed though inadequate account of this storm, as experienced in Cleveland and vicinity, may be of interest. Coming so early in the season and combining as it did the chief features of the windstorm, the snowstorm, the ice storm, and the cold wave, it swept down upon the almost wholly unprepared city with well-nigh paralyzing effect. Discomfort, not to say actual suffering, was very general, although fortunately brief.

The storm proper may be said to have commenced in Cleveland about 4.30 a. m., Sunday, November 9, and to have ended about 2 p. m. Tuesday, November 11, as those dates mark the beginning and the ending of precipitation. The precipitation was at first mostly rain and very light but mixed with a small amount of very moist snow. By 10 a. m., however, the rain had entirely ceased and the snowfall had become heavy, being still quite moist. The snow continued heavy until the afternoon or evening of the 10th when it became light and so continued until about 2 p. m. of the 11th. The total amount of snowfall, unmelted, during the entire storm was 22.2 inches, which melted gave 3.18 inches of water. The greatest amount of snowfall in any 24 hours during the storm was 17.4 inches between 7 p. m. of the 9th and 7 p. m. of the 10th. The greatest previous 24-hour fall since the opening of the station in 1870 was 13 inches on February 9, 1896.

At the beginning of the storm the temperature was about 36°, gradually falling during the day to slightly below 30°, remaining about stationary during the 10th and 11th, and falling to about 20° on the morning of the 12th. The storm set in with a moderate northwest wind that steadily increased, reaching the verifying velocity (40 miles per hour) about 1.50 p. m. of the 9th. From 2 p. m. of the 9th until 6 a. m. of the 10th the wind blew with a remarkably uniform velocity, the total movement during those 16 hours being 779 miles, or an average velocity of about 49 miles per hour. The highest or maximum velocity attained was only 62 miles at 4.40 p. m. of the 9th, and the extreme was 79 miles at about the same time. The wind continued quite constantly from the northwest up to 2 p. m. of the 9th when it showed a tendency to shift to the west but continued to vacillate between northwest and west until about 7.30 p. m. when it shifted definitely and permanently to the west, from which direction it came until about 8.20 a. m. of the 10th when it went to the southwest and so continued to the end of the storm.

At the beginning of the storm, the barometer showed a pressure of about 29.60 inches, decreasing rather rapidly. The lowest reading of the barometer as shown by the barograph trace was about 29.07 inches and occurred between 9 and 10 a. m. of the 9th, after which time the pressure rose, quite rapidly at first, until the end of the storm.

As stated already, the temperatures at the beginning of the storm were so near the freezing point as to make conditions decidedly favorable for the formation of ice and the heavy deposit of snow on wires, tree trunks, limbs, etc., so that by Sunday night all telegraph and telephone wires, electric-light wires, trolley wires, trees, etc., were incased in ice and so heavily burdened with snow that under the pressure of a 50-mile gale, poles and wires began to break and fall in every direction, trees either broke or were weighted to the ground, so that the telephone, telegraph, trolley, and electric-light services were completely paralyzed or seriously crippled and all traffic greatly demoralized. The extent of the losses can not be ascertained even approximately at this time but will be very large here in Cleveland. The loss of life in this city was small.—William H. Alexander, Cleveland, Ohio.

Buffalo, N. Y.—The dominating feature of the weather for the month of November, 1913, was the destructive storm that caused widespread disaster over the Great Lakes from the 7th to the 10th, inclusive. The storm center passed this station between 6 and 7 p. m. of the 9th and caused an unusually low reading of the barometer here, the lowest reading being 28.69 inches reduced to sea level.

Moderately heavy rain and only moderate to brisk northerly and easterly winds prevailed here on the 9th. At 3.30 a. m. of the 10th the wind became high from the south and from that hour until 5 p. m. a gale, accompanied by heavy snow, raged over this city, the highest velocity, 80 miles from the southwest, occurring at 1.17 p. m. Notwithstanding the gale averaged over 60 miles an hour from 7 a. m. to 4 p. m., there were no casualties at this end of Lake Erie, except that of lightship *No. 82*, which was lost with a crew of six men. The lightship was stationed off Point Abino, about 13 miles from Buffalo. Several small pleasure yachts were driven on the beach at the Buffalo Yacht Club. The small loss to the shipping interests in this section was unquestionably due to timely warnings issued by the bureau, for a large fleet of steamers remained in port until the storm subsided. More than 30 large steamers were back of the outer breakwater waiting for an opportunity to go out, and their estimated value is close to $1,000,000. The heavy moist snow that fell on the 10th impeded traffic here somewhat. In fact, I am of the opinion that if the gale that raged over the Lakes from the 8th to 10th, inclusive, had not been accompanied by heavy snow the loss of life would have been small and few, if any, boats would probably have been wrecked, as the storm was no record breaker for wind in this section.

Compared with other storms, particularly those that have occurred in November, we find that the gale on November 21, 1900, was of longer duration and much more destructive in this locality. Damage to the amount of $300,000 was done to the breakwaters by this storm and the shipping interests suffered a loss of $100,000. The maximum velocity for this storm was 80 miles from the southwest against 80 miles from the southwest in the recent storm, but the 80 miles in November, 1900, was at an elevation of 206 feet, while the 80 miles during the recent storm was at an elevation of 279 feet, which would make the former about 15 per cent higher. The verifying velocity was raised from 46 miles on the Prudential Building to 54 miles on the Telephone Building, the present location of the local offices.—D. Cuthbertson, Buffalo, N. Y.

NOVEMBER LAKE LEVELS.

The following data are from the report of the United States Lake Survey:

	Lake Superior.	Lakes Michigan and Huron.	Lake Erie.	Lake Ontario.
	Feet.	*Feet.*	*Feet.*	*Feet.*
Above tidewater at New York	602.91	580.44	572.28	246.06
Above or below:				
Stage of October, 1913	−0.12	−0.26	−0.14	−0.23
Stage of November, 1912	+0.47	+0.02	+0.36	−0.02
Mean stage of November last 10 years	+0.54	+0.06	+0.46	+0.39
Highest recorded stage	−0.60	−2.48	−1.39	−1.76
Lowest recorded stage	+1.41	+1.26	+1.58	+2.65
Probable change during December	−0.20	−0.20	−0.10	−0.20

TABLE 1.—*Climatological data for November, 1913. District No. 4, Lake Region.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Cloquet	Carlton	800	2	34.5	.....	60	21	2	10	36	0.78	.....	0.37	T.	5	10	7	13	.....	State Forest Exp. Station.
Duluth	St. Louis	1,133	42	35.6	+ 6.3	62	21	6	10	28	0.74	− 0.84	0.38	T.	6	9	7	14	sw.	U. S. Weather Bureau.
Grand Marais	Cook	606	...	.....	.....	58	21	.....	.....	.....	1.22	.....	0.56	0	6	6	10	14	nw.	O. W. Nelson.
Stephens Mine	St. Louis	1,500	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Oliver Iron Mining Co.
Two Harbors	Lake	614	19	38.2	+ 7.4	63	21	6	10	38	0.33	− 1.18	0.18	0	2	9	18	3	sw.	G. W. Watts.
Virginia	St. Louis	1,434	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Oliver Iron Mining Co.
Wisconsin.																				
Appleton	Outagamie	795	12	39.3	+ 4.5	66	21	12	10	24	1.59	− 0.23	0.80	3.2	7	13	3	14	sw.	Wm. O. Thiede.
Ashland	Ashland	615	22	38.8[a]	+ 7.1	65[a]	17	13[a]	15	32[a]	2.33	+ 0.92	1.26	0.5	6	14	3	13	sw.	Agricultural Exp. Station.
Bayfield	Bayfield	635	4	40.2	+10.2	62	17†	15	10	29	1.70	+ 0.19	.55	2.0	6	12	10	8	sw.	Rev. Sabinus Mollitor.
Cecil	Shawano	804	15	38.0	+ 6.2	64	21	15	10	26	0.87	− 0.78	0.35	2.0	6	8	9	13	sw.	Louis W. Schmidt.
Cornucopia	Bayfield	640	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Reed Fruit Co.
Crandon	Forest	1,060	18	34.5	+ 5.7	56	21	10	9	26	0.83	− 1.20	0.40	0.1	4	9	10	11	nw.	Ralph Van Zile.
Florence	Florence	1,293	22	35.2[b]	+ 5.4	58[b]	19†	11[b]	10	34[b]	1.04	− 0.97	0.42	T.	4	12[c]	0[c]	15[c]	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	27	40.4	+ 6.9	68	21	12	11	32	1.52	− 0.29	1.02	3.0	5	12	3	15	s.	Edward A. Seeley.
Grand River Locks	Marquette	770	17	41.0	.....	69	21	15	11	32	1.72	− 0.17	1.00	1.0	8	15	4	11	sw.	Jerry Parkinson.
Green Bay	Brown	617	27	39.8	+ 7.3	66	21	18	11	23	1.91	− 0.05	1.06	1.8	11	6	6	18	s.	U. S. Weather Bureau.
High Falls	Marinette	1,125	1	36.6	.....	65	21	10	7	40	1.23	.....	0.50	T.	7	18	5	7	sw.	No. Hydro-Elec. Pow. Co.
Iron River	Bayfield	1,096	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Winfield E. Tripp.
Kewaunee	Kewaunee	590	4	40.4	.....	68	21	18	11	31	1.11	.....	0.58	0.5	7	7	2	21	sw.	Anton M. Jessen.
Manitowoc	Manitowoc	616	62	41.0	+ 5.4	68	21	18	11	26	1.43	− 0.68	0.61	3.0	7	7	7	16	w.	Miss Johanna Lups.
Menasha	Winnebago	764	16	.....	.....	.....	.....	.....	.....	.....	0.97	− 0.30	0.76	2.5	5	15	5	10	sw.	Geo. T. Allanson.
Menominee Falls	Waukesha	842	4	40.6	.....	68	7	15	11	28	2.61	.....	1.53	0.2	10	12	6	12	sw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	43	43.4	+ 7.3	70	21	19	11	27	2.17	+ 0.19	1.32	T.	8	9	5	16	sw.	U. S. Weather Bureau.
New London	Outagamie	762	17	38.5	+ 4.9	65	21	15	10	31	1.43	− 0.41	0.80	3.0	3	11	6	13	sw.	August H. Pape.
Oconto	Oconto	590	22	39.2	+ 5.3	66	21	14	11	29	1.53	− 0.47	0.52	4.0	7	8	4	18	s.	Harry M. Lord.
Oshkosh	Winnebago	744	24	38.4	+ 4.2	67	21	10	11	32	1.00	− 0.69	0.55	2.0	5	16	5	9	sw.	Evan Vincent.
Pine River	Waushara	900	18	39.4	+ 5.7	67	21	13	11	29	1.30	− 0.40	0.62	1.8	6	4	13	13	sw.	Geo. H. Carpenter.
Plum Island	Door	588	5	40.3	.....	63	22	24	10	23	2.04	.....	0.50	0	6	10	6	14	sw.	Wm. Robinson.
Plymouth	Sheboygan	843	3	40.4	.....	68	21	16	11	25	2.29	.....	1.20	3.0	9	11	6	13	sw.	Paul O. Feldrappe.
Fort Washington	Ozaukee	713	20	41.8	+ 6.0	69	21	17	10	30	2.92	+ 0.90	1.48	1.0	8	9	3	18	se.	Richard C. Kann.
Racine	Racine	633	16	44.2	+ 5.2	71	21	18	11	33	1.64	− 0.35	0.70	T.	8	13	1	16	sw.	Daniel Davis.
Ripon	Fond du Lac	1,031	3	39.8[a]	.....	61[b]	19	11	10	31[b]	1.67	.....	1.02	3.0	9	14	4	12	sw.	Ripon College.
Sheboygan	Sheboygan	831	14	42.2	+ 4.7	68	21	18	11	31	1.85	− 0.18	0.92	2.0	5	8	6	16	sw.	Louis C. Meyer.
Sturgeon Bay	Door	600	14	39.0	+ 4.3	66	21	17	10	29	1.24	.....	0.36	0.8	8	9	11	10	w.	Adam N. Dier.
Superior	Douglas	701	4	35.8	.....	63	21	8	10	33	0.66	.....	0.34	0	7	11	12	7	sw.	Edward B. Banks.
Waupaca	Waupaca	857	18	38.2	+ 5.1	65	21	14	11	38	1.46	− 0.28	0.78	0.5	7	11	6	13	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	41	47.2	+ 7.9	72	21	20	11	30	1.47	− 1.03	0.58	T.	10	9	5	16	sw.	U. S. Weather Bureau.
Highland Park	Lake	691	...	.....	.....	.....	.....	.....	.....	.....	2.21	− 0.08	1.20	T.	6	.....	.....	.....	.....	Jesse L. Smith.
Indiana.																				
Auburn	DeKalb	874	17	44.0[1]	+ 5.3	70[1]	...	19[1]	....	43[1]	1.41	− 0.96	0.49	.....	5	.....	.....	.....	.....	Mrs. Josie B. Kuhlman.
Berne	Adams	849	4	45.1	.....	71	22	22	1†	36	2.79	.....	0.73	1.6	15	8	9	13	sw.	Henry M. Reusser.
Fort Wayne	Allen	856	17	45.2	+ 4.6	70	22	23	1	31	2.44	− 0.50	0.70	0.7	15	9	3	18	sw.	U. S. Weather Bureau.
Hammond	Lake	598	22	47.0	+ 7.8	73	21	12	11	33	1.28	− 1.03	0.48	T.	7	7	7	16	.....	Carson W. Whitney.
Howe	Lagrange	886	8	42.5	.....	70	21†	21	5	37	2.89	.....	1.03	3.0	11	13	0	17	s.	A. A. Wade.
Notre Dame	St. Joseph	712	2	45.4	.....	69	21	21	11	29	2.25	.....	0.50	9.0	11	7	9	14	sw.	U. S. Weather Bureau.
Whiting	Lake	606	4	46.6	.....	71	21	18	11	35	1.20	.....	0.45	T.	9	10	8	12	sw.	D. H. Boyd.
Michigan—Upper Peninsula.																				
Baraga	Baraga	623	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	12	0	18	.....	D. S. S. & A. Ry.
Bergland	Ontonagon	1,300	3	37.3	.....	60	17	7	15	32	1.39	.....	0.51	.....	5	9	2	19	sw.	Frank McMonigal.
Calumet	Houghton	1,246	25	35.3	+ 4.8	60	21	6	10	26	2.12	− 0.61	0.72	4.0	7	8	7	15	w.	E. S. Grierson.
Chatham	Alger	875	12	38.4	+ 6.5	59	12†	7	13	38	2.40	− 0.60	0.50	9.0	6	12	9	9	.....	Upper Peninsula Exp. Sta.
Deer Park	Luce	610	12	37.2	+ 3.1	56	21	19	16	23	1.30	− 0.93	0.60	10.0	4	7	1	22	s.	Mrs. Sarah E. McGaw.
Eagle Harbor	Keweenaw	622	14	39.8	+ 4.1	63	21	21	11	25	1.30	− 1.36	0.30	.....	5	11	0	19	sw.	T. J. Bennets.
Escanaba	Delta	612	40	38.2	+ 6.5	62	21	19	9	30	1.54	− 0.70	0.45	2.5	10	8	4	18	sw.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	12	35.8	+ 5.9	66	17	5	11	33	3.33	+ 0.94	1.15	12.0	8	9	5	16	sw.	W. B. Hatfield.
Grand Marais	Alger	610	12	39.0	+ 3.9	59	21	19	9	26	1.10	− 1.35	0.30	5.0	6	2	6	22	nw.	Mrs. Lena Truedell.
Houghton	Houghton	668	12	37.4	+ 5.8	63	21	16	10	29	2.90	+ 0.10	1.38	11.3	10	6	7	17	w.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	16	35.9	+ 8.7	60	21†	− 1	15	39	3.05	+ 1.19	2.00	9.0	5	7	4	19	w.	D. S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	12	39.0	+ 6.6	63	17	15	10†	35	0.89	− 0.80	0.38	0.2	6	10	10	10	sw.	Chapin Mining Co.
Iron River	Iron	1,504	16	35.6	+ 7.0	59	21	11	15	33	3.60	+ 1.29	0.60	8.0	9	12	9	9	sw.	Victor D. Laing.
Ironwood	Gogebic	1,520	10	37.5	+ 6.5	59	16†	13	10	30	1.90	− 0.50	0.71	6.0	5	14	7	9	sw.	J. V. Brennan.
Ishpeming	Marquette	1,536	13	35.4	+ 5.1	57	5†	9	15	27	2.05	− 0.48	0.60	12.3	12	4	11	15	sw.	Cleveland Cliffs Iron Co.
Isle Royale	Keweenaw	610	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	J. A. Malone.
Mackinac Island	Mackinac	831	12	38.4	+ 3.6	63	22	19	10	23	1.54	− 1.18	1.00	2.5	7	4	19	7	n.	Mackinac Island State Park Commission.
Maple Ridge	Delta	.....	7	35.5	.....	60	6†	10	15	36	2.15	.....	0.45	8.0	8	15	1	14	n.	Herman Johnson.
Marquette	Marquette	734	42	38.7	+ 6.8	64	5	18	9	25	1.33	− 1.46	0.42	8.6	9	6	5	19	sw.	U. S. Weather Bureau.
Menominee	Menominee	581	14	40.1	+ 4.3	66	21	16	11	27	1.32	− 1.20	0.45	3.0	5	14	2	14	sw.	Chief of Fire Dept.
Munising	Alger	631	16	37.1	+ 5.0	58	21†	18	16†	31	2.49	− 0.41	0.87	14.5	11	9	6	15	s.	Albert Oas.
Newberry	Luce	773	11	36.8	+ 5.7	59	21	17	10	31	2.78	+ 0.82	0.90	15.5	11	4	9	17	sw.	John Brown.
Ontonagon	Ontonagon	1,147	12	38.3	.....	63	21	18	15	32	.....	.....	.....	.....	...	10	5	15	ne.	T. A. Green.
Powers	Menominee	868	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	4	18	8	sw.	Chicago & North Western Ry.
St. Ignace	Mackinac	593	23	.....	.....	.....	.....	20	10	....	1.25	− 1.21	1.00	1.5	5	15	10	5	n.	D. S. S. & A. Ry.
Sault Ste Marie	Chippewa	614	25	36.6	+ 5.9	63	21	16	10	31	2.16	− 0.76	0.76	3.3	14	1	4	25	se.	U. S. Weather Bureau.
Seney	Schoolcraft	730	1	36.3	.....	60	21	10	16	40	1.71	.....	0.60	8.0	6	14	4	12	sw.	Western Land Securities Co.
Thomaston	Gogebic	1,347	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	D. S. S. & A. Ry.
Victoria	Ontonagon	1,263	3	36.2	.....	59	21	12	15	38	2.03	.....	1.40	.....	4	14	5	11	n.	R. S. Schultz, Jr.
Watersmeet	Gogebic	.....	4	35.0	.....	56	5†	4	15	30	1.73	.....	0.46	3.9	8	10	1	19	sw.	B. N. Grant.
Whitefish Point	Chippewa	610	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Robert Carlson.
Michigan—Lower Peninsula.																				
Adrian	Lenawee	770	35	43.0	+ 4.1	70	21†	21	5†	38	2.17	− 1.10	0.60	2.0	7	7	8	15	sw.	H. E. Hubbard.
Allegan	Allegan	698	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Pere Marquette R. R.
Alma		750	26	41.5	+ 3.9	68	21	21	10	29	2.77	+ 0.08	1.36	6.0	6	8	6	16	sw.	P. M. Smith.
Alpena	Alpena	609	40	38.8	+ 5.1	65	21	21	16	26	2.85	+ 0.29	0.97	11.2	11	2	14	14	nw.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for November, 1913. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Michigan—Lower Peninsula*—Continued.**																				
Ann Arbor	Washtenaw	930	33	42.6	+ 5.5	68	22	22	1	28	1.82	− 0.71	0.60	6.3	10	7	7	16	s.	University of Michigan.
Arbela	Tuscola	728	17	40.7	+ 2.8	69	22	17	10	32	2.51	− 0.25	0.62	8.0	7	0	8	22	nw.	Wm. Atkin.
Armada	Macomb	.....	24	40.4[a]	+ 4.0	66[a]	22	19[a]	10	34[a]	2.03	− 0.62	0.73	4.5	11[a]	4[a]	10[a]	15[a]	sw.	R. O. Gould.
Battle Creek	Calhoun	822	29	41.6	+ 3.3	68	21	21	10	32	2.37	− 0.07	0.70	1.0	9	12	0	18	sw.	Elmer E. Sager.
Bay City	Bay	593	17	42.5	+ 5.5	69	22	19	10	31	2.48	+ 0.04	1.15	3.0	7	9	14	7	sw.	Pere Marquette R. R.
Benzonia	Benzie	832	16	39.4	+ 4.0	67	21	21	10	25	1.94	− 1.25	0.94	0.9	10	4	16	10	sw.	Wallace Nutting.
Big Rapids	Mecosta	906	17	40.8	+ 5.8	62	22	21	10†	30	1.83	− 0.91	1.35	0	7	1	21	8	sw.	Supt. Water Works.
Bloomingdale	Van Buren	.....	9	43.4	.....	69	21	22	10	29	2.43	.....	0.73	6.5	7	14	1	15	sw.	John M. Haven.
Cadillac	Wexford	1,293	4	38.8	.....	63	21	17	10	26	2.10	.....	1.33	3.0	6	9	4	17	sw.	Cadillac W. & L. Co.
Cassopolis	Cass	903	12	.....	.....	70	22	.....	.....	.....	.....	.....	.....	.....	.....	11[e]	0[e]	14[e]	nw.	Michigan Central R. R.
Charlevoix	Charlevoix	610	35	38.2	+ 1.4	55	26	28	3	19	.....	.....	.....	.....	.....	1	9	20	.....	Pere Marquette R. R.
Charlotte	Eaton	.....	9	43.0	.....	68	21	19	10	31	1.32	.....	0.35	4.0	7	10	3	17	sw.	City of Charlotte.
Cheboygan	Cheboygan	611	23	.....	.....	.....	.....	.....	.....	.....	0.90	− 1.77	0.45	.....	3	16[a]	0[a]	13[a]	nw.	Francis A. Barlow.
Clinton	Lenawee	830	23	44.2	+ 6.4	73	21	21	12	37	1.65	− 1.35	0.53	5.0	6	12	4	14	sw.	David Woodward.
Coldwater	Branch	984	16	44.6	+ 6.3	69	21	22	10	35	1.85	− 1.35	0.55	1.5	9	12	2	16	s.	L. S. & M. S. R. R.
Croton	Newaygo	685	5	40.8	.....	.....	.....	22	10†	31	1.98	.....	1.44	T.	10	4	14	12	sw.	Gr. Rpds. Musk. Power Co.
Detroit	Wayne	730	42	43.6	+ 5.0	69	22	19	10	31	1.76	− 0.87	0.36	3.6	13	8	6	16	sw.	U. S. Weather Bureau.
Durand	Shiawassee	799	5	42.2[a]	.....	69[a]	22	20[a]	10	33[a]	1.20	.....	0.62	0.5	5[a]	12[b]	2[b]	14[b]	sw.	Chief Train Dispatcher.
East Tawas	Iosco	590	16	41.1	+ 5.2	60	19	18	11	30	1.55	− 0.41	0.65	.....	7	11	7	12	sw.	Detroit & Mackinaw Ry.
Eloise	Wayne	640	16	42.8	+ 4.4	70	22	21	10	30	1.61	− 0.29	0.39	2.4	11	8	7	15	w.	John Gilmore.
Five Channels	Iosco	.....	0	40.5[b]	.....	66[b]	21†	18[b]	10†	32[b]	1.00	.....	0.26	1.0	7	6[c]	8[c]	13[c]	.....	Au Sable Electric Co.
Flint	Genesee	730	24	43.0	+ 7.1	69	21	19	10	35	2.17	− 0.29	0.70	5.0	11	9	4	17	w.	William L. Fisher.
Frankfort	Benzie	589	9	40.6	.....	58	21	20	10	18	.....	.....	.....	.....	.....	6	0	24	s.	Geo. Morency.
Ganges	Allegan	665	4	44.6	.....	67	21	24	9†	27	1.92	.....	0.54	4.0	8	10	3	17	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	13	37.1	+ 5.2	64	21	12	9†	31	1.55	− 2.06	0.74	.....	5	8	0	22	nw.	Michigan Central R. R.
Grand Haven	Ottawa	628	42	42.9	+ 4.9	65	20	23	10	22	2.76	+ 0.23	1.48	2.4	14	6	6	18	s.	U. S. Weather Bureau.
Grand Rapids	Kent	707	24	43.8	+ 5.7	70	21	22	10	24	2.86	+ 0.33	1.85	1.0	13	7	4	19	s.	Do.
Grape	Monroe	625	23	43.2	+ 4.2	72	22	20	12	38	1.79	− 0.74	0.47	5.0	12	9	7	14	w.	Joseph W. Morris.
Grass Lake	Jackson	989	7	41.0	.....	65	21†	18	10†	26	1.94	.....	0.80	6.0	7	15	2	13	sw.	Menzo Conklin.
Grayling	Crawford	1,147	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. N. Insley.
Greenville	Montcalm	802	1	.....	.....	.....	.....	.....	.....	.....	0.65	.....	0.31	T.	7	11	2	17	sw.	Engineer, Water Works.
Harbor Beach	Huron	635	25	41.9	+ 4.7	68	22	20	11†	38	1.60	− 0.55	0.60	5.5	7	8	10	12	sw.	Pere Marquette R. R.
Harrison	Clare	1,159	20	42.5	+ 9.1	71	18	19	12	26	1.38	− 0.97	0.75	.....	3	8	4	18	sw.	Do.
Harrisville	Alcona	616	29	39.4	+ 4.5	62	22†	18	10	31	.....	.....	.....	.....	.....	9	6	15	sw.	Mrs. D. W. Mitchell.
Hart	Oceana	698	21	41.0	+ 3.0	66	22	24	3†	22	2.65	+ 0.33	0.82	3.0	8	4	13	13	s.	Pere Marquette R. R.
Hayes	Huron	620	23	41.9[b]	+ 3.5	68[b]	21	22[b]	11†	27[b]	1.10	− 0.81	0.74	.....	4	6[a]	14[a]	9[a]	sw.	C.F. Leipprandt.
Highland	Oakland	1,006	21	.....	.....	.....	.....	.....	.....	.....	2.41	− 0.46	0.67	5.0	8	.....	.....	.....	.....	A. D. DeGarmo.
Hillsdale	Hillsdale	1,150	16	43.0	+ 5.6	68	21	21	10	33	2.85	− 0.10	0.79	6.5	10	9	4	17	sw.	C. L. Herron.
Holland	Ottawa	610	7	43.4	.....	68	21	24	10	29	2.15	.....	0.95	3.5	12	6	11	13	sw.	City of Holland.
Houghton Lake	Roscommon	.....	0	37.7	.....	64	21	20	10	39	1.60	.....	1.08	T.	7	10	2	18	w.	James H. Ostrander.
Howell	Livingston	924	21	42.6	+ 6.0	67	21	20	10	29	2.72	+ 0.44	0.69	5.3	13	10	5	15	sw.	Frank Sharp.
Ivan	Kalkaska	.....	24	39.0	+ 5.5	66	21	19	11	34	1.76	− 0.94	0.82	2.0	6	4	16	10	sw.	O. L. Giddings.
Jackson	Jackson	927	16	43.8	+ 5.5	69	21	19	10	35	1.99	− 0.33	0.56	4.0	11	13	4	13	s.	City of Jackson.
Jeddo	St. Clair	667	24	41.0	+ 4.3	70	22	18	12	31	2.60	+ 0.12	0.85	10.5	9	7	9	14	sw.	William Bice.
Johannesburg	Otsego	.....	0	37.5	.....	66	21	16	10	32	2.12	.....	0.80	6.0	7	6	14	10	sw.	Axel Bocker.
Kalamazoo	Kalamazoo	955	37	43.2	+ 5.6	69	21	22	10	33	2.55	− 0.26	0.60	6.0	6	8	7	15	w.	Kalamazoo Asylum.
Lansing (Agr. Col.)	Ingham	863	49	41.7	+ 4.8	69	21	20	10	32	2.38	− 0.03	0.59	6.2	16	6	7	17	sw.	U. S. Weather Bureau.
Lansing (capitol)	do	881	26	41.7	+ 4.6	70	21	20	10	32	2.46	− 0.10	0.55	6.8	14	7	2	21	sw.	State Board of Health.
Lapeer	Lapeer	827	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michigan Home.
Ludington	Mason	637	15	41.8	+ 4.0	63	20	24	10	28	1.68	− 0.36	0.85	3.0	9	6	7	17	s.	U. S. Weather Bureau.
Luther	Lake	1,028	3	39.8	.....	67	21	18	14†	35	1.65	.....	0.78	1.5	14	10	5	15	sw.	John W. Nichoson.
Mackinaw	Cheboygan	592	22	37.4	+ 1.7	60	21	20	9†	24	1.80	− 0.80	1.20	12.0	3	16	8	6	e.	G. R. & I. Ry.
Mancelona	Antrim	1,121	17	36.6[i]	+ 1.9	.....	.....	14[i]	1	38[i]	.....	.....	.....	.....	.....	5[i]	0[i]	16[i]	.....	Do.
Manistee	Manistee	600	16	42.0	+ 5.3	61	21	23	10	23	0.69	− 1.76	0.58	T.	2	18	0	12	sw.	Postmaster.
Marshall	Calhoun	896	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. B. Stuart.
Midland	Midland	604	14	40.9	+ 4.0	67	20	12	15	35	0.77	− 0.73	0.75	0.2	2	10	5	15	sw.	Pere Marquette Railroad.
Morenci	Lenawee	811	6	43.9	.....	70	22	21	5	37	1.96	.....	0.70	1.4	12	10	5	15	s.	George J. Tripp.
Mount Clemens	Macomb	615	13	43.0	+ 4.1	71	22	20	10	33	1.78	− 0.57	0.40	4.8	6	11	0	19	sw.	Waterworks.
Mount Pleasant	Isabella	826	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pere Marquette Railroad.
Muskegon	Muskegon	587	17	43.6	+ 4.8	69	21	21	9	31	2.45	+ 0.05	1.35	4.0	8	8	0	22	sw.	G. R. & I. Ry.
Old Mission	Grand Traverse	858	19	39.5	+ 3.2	68	21	19	10	29	2.29	− 0.36	1.10	3.5	8	2	15	13	sw.	E. O. Ladd.
Olivet	Eaton	934	23	42.8	+ 6.2	69	21	22	10	30	2.80	+ 0.05	0.70	1.8	10	11	3	16	sw.	G. A. Knapp.
Omer	Arenac	616	14	.....	.....	.....	.....	.....	.....	.....	1.18	− 0.60	1.03	.....	5	16	8	6	.....	Detroit&Mackinaw Railway.
Onaway	Presque Isle	826	10	39.3	+ 4.5	68	21	18	25	38	2.28	+ 0.40	0.80	2.0	8	4	8	18	sw.	Do.
Owosso	Shiawassee	731	16	43.0	+ 6.1	66	22	23	16	30	2.03	− 0.32	0.61	2.2	14	3	18	9	sw.	Owosso Sugar Co.
Petoskey	Emmet	660	23	40.6[e]	+ 5.3	68[e]	21	22[e]	11	30[e]	1.20	− 1.74	0.60	12.0	4	7[e]	8[e]	10[e]	.....	G. R. & I. Ry.
Plymouth	Wayne	725	16	42.6	+ 3.7	70	22	19	12	36	.....	.....	.....	.....	.....	12	2	16	w.	Pere Marquette Railroad.
Pontiac	Oakland	935	13	40.8	+ 2.8	65	21	18	10	28	2.26	− 0.23	0.55	5.0	8	11	6	13	sw.	Fred W. Shaw.
Port Austin	Huron	618	16	40.2	+ 2.1	68	21	21	10†	28	2.06	+ 0.33	1.10	4.0	7	11	7	12	s.	Pere Marquette Railroad.
Port Huron	St. Clair	639	38	41.5	+ 4.7	65	21	20	10	27	1.88	− 0.79	0.64	7.6	15	5	9	16	sw.	U. S. Weather Bureau.
Reed City	Osceola	1,035	16	40.4	+ 5.6	67	21	20	10†	33	2.87	+ 0.63	1.05	0.2	13	8	0	22	sw.	Osceola Light & Power Co.
Roscommon	Roscommon	1,141	12	36.7[a]	+ 2.3	63[a]	23	15[a]	15	29[a]	1.63	− 0.25	1.15	1.0	5	5[a]	16[a]	8[a]	sw.	Marcus Schaaf.
Saginaw, East Side	Saginaw	601	11	43.2[f]	+ 4.1	70[f]	21	20[f]	10	26[f]	.....	.....	1.23	5.5	.....	1[f]	19[f]	4[f]	.....	Postmaster.
Saginaw, West Side	do	641	18	41.6	+ 5.3	69	21	20	10	29	2.69	+ 0.40	1.27	5.2	12	6	6	18	sw.	U. S. Weather Bureau.
St. James	Charlevoix	681	7	38.1[d]	.....	55[i]	7†	13	10	29[i]	1.70	.....	0.40	T.	8	8	4	18	sw.	Rev. Edward A. Jewell.
St. Joseph	Berrien	593	26	45.9[b]	+ 5.5	68[b]	21	29[b]	11	27[b]	1.69	− 1.24	0.50	0	6	10	5	15	sw.	City of St. Joseph.
Sandusky	Sanilac	790	4	39.5	.....	67	22	18	12†	33	1.24	.....	0.44	6.0	5	11	6	13	sw.	Pere Marquette Railroad.
Saranac	Ionia	639	18	42.8	+ 6.5	69	21	21	5†	35	2.12	− 0.40	1.10	T.	7	11	0	19	sw.	John Wallington.
South Haven	Van Buren	585	17	.....	.....	.....	.....	.....	.....	.....	2.35	− 0.33	0.75	3.0	9	11	3	16	sw.	Capt. James S. Donahue.
Thornville	Lapeer	975	36	42.0	+ 4.4	65	18	20	10	22	2.45	− 0.31	0.45	5.0	9	1	14	15	se.	J. S. Caulkins.
Traverse City	Grand Traverse	588	16	44.0	+ 7.0	68	21	25	10†	33	2.65	+ 0.49	1.25	3.0	2	11	4	15	w.	G. R. & I. Ry.
Vassar	Tuscola	641	12	42.8[a]	+ 4.8	69[a]	21	19[a]	10	34[a]	3.15	+ 1.11	1.30	6.0	5	6[a]	8[a]	15[a]	sw.	Pere Marquette Railroad.
Wasepi	St. Joseph	842	16	44.4	+ 6.3	69	21	19	3	38	2.39	− 0.51	0.54	2.0	12	9	0	21	sw.	Charles A. Palmer.
Weber Dam	Ionia	.....	0	43.0	.....	67	21	22	9	27	1.86	.....	0.97	T.	7	9	4	17	sw.	Au Sable Electric Co.
West Branch	Ogemaw	973	8	38.6	+ 5.3	67	21†	13	10†	41	2.50	+ 1.07	0.70	5.0	7	7	6	17	nw.	Michigan Central Railroad.
Ypsilanti	Washtenaw	736	28	42.5	+ 5.3	70	22	18	12	33	2.37	− 0.79	0.63	6.3	11	4	17	9	sw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	26	42.7	+ 2.7	69	22	19	12	31	2.96	+ 0.59	1.50	15.0	9	11	3	16	s.	Prof. C. R. Olin.
Antwerp	Paulding	733	1	45.0	.....	72	22	22	1†	39	2.55	.....	0.85	2.5	5	11	0	19	nw.	North G. Osborn.
Benton Ridge	Hancock	800	20	44.2	+ 3.7	72	21†	20	12	33	2.32	− 0.24	0.45	7.0	13	8	9	13	sw.	J. W. Powell.
Bowling Green	Wood	670	32	42.4	+ 2.9	70	22	16	12	42	2.12	− 0.84	0.40	3.5	11	10	3	17	sw.	G. C. Houskeeper.
Bucyrus	Crawford	1,000	19	42.8	+ 3.6	69	22†	18	12	36	2.65	+ 0.34	0.80	14.0	9	13	1	16	s.	James R. Hopley.
Cleveland [1]	Cuyahoga	762	42	44.6	+ 4.2	72	22	20	12	30	3.98	+ 1.23	2.09	22.2	16	5	6	19	s.	U. S. Weather Bureau.
Cleveland [2]	do	754	16	43.8	+ 3.3	71	22	20	12	31	3.62	+ 1.51	1.55	20.0	18	6	5	19	s.	Rev. F. L. Odenbach, S.
Conneaut	Ashtabula	675	3	44.6	.....	72	22	21	12	36	3.55	.....	1.35	5.0	12	8	1	21	sw.	E. L. Ransom.

TABLE 1.—*Climatological data for November, 1913. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Continued.																				
Findlay	Hancock	776	24	45.7	+ 5.6	69	21†	16	12	35	1.99	− 0.78	0.54	.....	14	11	6	13	sw.	Dr. E. A. Moser.
Fremont	Sandusky	628	11	44.8	+ 3.8	75	22	19	12	35	3.05	+ 0.90	1.80	18.0	8	13	5	12	sw.	E. Stanley Thomas.
Hedges	Paulding	725	19	45.2	+ 5.7	73	22	22	1†	37	2.24	− 0.27	0.56	3.0	10	10	5	15	w.	Charles Stutzman.
Hillhouse	Lake	997	20	43.0	+ 3.6	72	22	18	12	35	4.80	+ 1.44	2.00	17.0	11	5	12	13	sw.	J. W. Doncaster.
Hiram	Portage	1,260	33	42.4	+ 3.6	69	22	17	12	32	4.26	+ 1.15	2.02	25.5	12	9	11	10	sw.	Prof. G. H. Colton.
Hudson	Summit	1,123	52	42.8	+ 3.2	71	22	17	12	34	2.88	− 0.17	1.40	22.0	11	8	10	12	nw.	Dr. W. I. Chamberlain.
Lima	Allen	875	14	44.8	+ 3.4	70	22	22	11	34	3.34	+ 1.29	1.20	13.0	11	13	5	12	sw.	Miss Ollie De Long.
Medina	Medina	944	25	42.4	+ 1.6	71	22	16	12	38	3.59	+ 0.78	2.24	22.0	6	9	6	15	s.	F. W. Clark.
Montpelier	Williams	880	21	44.0	+ 6.2	70	22	22	5	35	3.21	+ 0.28	0.93	4.0	10	13	0	17	w.	G. L. Laser.
Napoleon	Henry	680	26	44.1	+ 3.8	72	22	23	4†	37	2.49	− 0.17	0.75	.....	11	10	0	20	w.	A. C. Senter.
New Bremen	Auglaize	1,038	20	45.2	+ 3.9	73	20	21	1	34	1.91	− 1.02	0.37	2.5	11	10	9	11	sw.	Miss Lillian Grothaus.
North Royalton	Cuyahoga	1,000	20	42.2	+ 2.4	70	22	20	10†	32	3.19	+ 0.51	1.20	18.0	9	10	9	11	sw.	W. S. Edgerton.
Norwalk	Huron	719	27	44.4	+ 3.9	73	22	20	12	39	3.30	+ 0.78	1.00	18.0	15	11	3	16	w.	Giles R. Gregory.
Oberlin	Lorain	855	38	43.6	+ 3.5	74	22	15	12	36	4.31	+ 1.78	1.88	21.5	13	13	1	16	sw.	Prof. F. F. Jewett.
Ottawa	Putnam	720	20	44.2	+ 3.2	71	22	22	12	38	2.19	− 0.48	0.80	T.	10	7	10	13	sw.	Prof. J. T. Maidlow.
Sandusky	Erie	629	36	45.0	+ 4.2	73	22	21	12	30	2.25	− 0.49	0.82	8.3	16	7	3	20	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	31	46.0	+ 5.4	74	22	21	12	32	3.34	+ 0.60	1.40	17.0	13	8	11	11	s.	Prof. T. H. Sonnedecker.
Toledo	Lucas	769	42	45.3	+ 5.6	72	22	22	10	27	2.54	− 0.11	0.66	6.5	16	10	4	16	sw.	U. S. Weather Bureau.
Upper Sandusky	Wyandot	854	30	46.0[b]	+ 4.8	70[b]	20	21[a]	12	29[b]	3.25	+ 0.62	0.92	6.0	9	11	6	13	w.	Robert E. Tracht.
Vickery	Sandusky	588	20	44.2	+ 4.0	74	22	15	12	40	3.83	+ 1.45	1.20	19.0	14	9	7	14	sw.	John W. Barr.
Wapakoneta	Auglaize	898	1	44.1	.....	70	20†	22	11†	32	2.79	.....	0.78	13.0	14	8	8	14	s.	Dr. William Kayser.
Wauseon	Fulton	780	41	43.6	+ 6.5	71	22	23	2†	38	2.61	− 0.49	0.62	2.4	18	6	8	16	s.	Thomas Mikesell.
Wickliffe	Lake	740	1	.....	.....	.....	.....	.....	.....	.....	2.72	.....	1.00	12.0	9	6	9	15	s.	C. M. Richardson.
Pennsylvania.																				
Erie	Erie	658	38	45.7	+ 4.6	73	21	25	10	28	4.18	+ 0.57	1.27	19.3	15	3	9	18	sw.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	22	42.4	+ 7.7	70	21	21	12	35	4.72	+ 1.24	0.96	6.5	11	13	9	8	s.	A. E. Cooley.
Angelica	Allegany	1,340	30	41.0	+ 5.0	66	21	20	15	27	2.01	− 0.45	1.32	0.5	14	1	7	22	w.	C. P. Arnold.
Appleton	Niagara	270	22	44.0	+ 5.5	70	7	23	11	27	3.00	− 0.38	1.50	2.0	11	7	6	17	sw.	H. A. Van Wagoner.
Auburn	Cayuga	715	44	44.2	+ 5.4	66	23	25	27	24	2.45	− 0.58	0.76	T.	13	5	7	18	w.	J. W. Ackerman.
Avon	Livingston	585	18	44.4	+ 6.0	69	7†	25	27	31	1.87	− 0.18	1.11	.....	7	0	6	24	.....	W. G. Markham.
Brockport	Monroe	537	17	42.6	+ 4.1	72	21	23	11	37	1.96	− 1.79	1.02	0.5	8	7	4	19	sw.	C. O. Beaman.
Buffalo	Erie	767	62	43.4	+ 4.1	71	21	26	10	23	3.43	+ 0.08	1.08	6.2	16	3	11	16	sw.	U. S. Weather Bureau.
Canisius College	....do	.....	0	44.3	.....	70	21	25	10†	31	4.01	.....	1.00	.....	16	4	3	23	sw.	Michael J. Ahern, S. J.
Canton	St. Lawrence	448	19	40.0	+ 6.1	66	8	18	28	33	2.72	− 0.69	1.08	4.0	14	7	8	15	sw.	Do.
Cape Vincent	Jefferson	246	8	42.0	.....	61	8	22	28	25	3.10	.....	1.25	.....	8	6	7	17	sw.	J. H. Grapotte.
Chazy	Clinton	151	13	39.7	+ 5.8	64	7	15	28	39	0.22	− 1.30	0.10	1.0	3	12	8	10	s.	W. R. North.
Chestnut Lawn	Wyoming	1,090	1	42.8	.....	71	21	24	15†	38	2.41	.....	1.40	1.5	14	12	8	10	sw.	Charles Peterson.
Dannemora	Clinton	1,490	8	37.8	.....	71	24	14	27†	37	2.36	.....	1.02	7.9	9	24	5	1	w.	Dr. D. L. Van Derzee.
Elba	Genesee	500	14	41.6	+ 3.6	69	21	19	10†	34	2.59	+ 0.52	1.08	3.0	10	15	5	10	sw.	Joseph S. Wilford.
Fayetteville	Onondaga	530	12	43.6	+ 5.7	73	22	20	27	42	2.35	− 0.26	1.21	T.	11	9	11	10	se.	Dana H. Wells.
Gabriels	Franklin	1,729	11	35.8	.....	65	7†	11	28	37	2.56	.....	0.78	4.0	10	11	2	17	w.	Gabriels Sanitarium.
Geneva	Ontario	550	0	44.5	.....	73	22	22	27	33	2.41	.....	1.37	T.	10	.....	.....	.....	.....	Agricultural Exp. Station.
Harkness	Clinton	622	11	40.3	+ 5.5	71	6	15	28	40	1.30	− 0.20	0.45	1.0	8	25	1	4	w.	J. W. Harkness.
Hemlock Lake	Livingston	900	15	43.8	+ 4.8	66	21	25	27	24	2.43	+ 1.74	1.34	1.0	11	10	4	16	s.	B. P. McGrady.
Hunt	....do	1,321	14	43.6	+ 4.0	74	22	22	27	44	2.55	− 0.67	1.50	.....	5	6	9	15	sw.	W. S. Barager.
Ithaca	Tompkins	928	35	43.6	+ 6.0	71	22	23	27	37	2.21	− 0.37	1.51	1.4	10	7	7	16	nw.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	15	39.3	+ 5.4	80	6	12	28	56	2.64	+ 0.02	0.65	3.0	12	15	6	9	nw.	E. R. Wells.
King Ferry	Cayuga	.....	13	.....	.....	.....	.....	.....	.....	.....	2.39	+ 0.20	1.38	0.8	8	7	9	14	s.	L. A. Goodyear.
Lake George	Warren	350	16	41.6	+ 4.6	70	20	17	27	33	1.69	− 1.38	0.81	3.2	7	10	10	10	s.	Chas. Forsell.
Lake Placid Club	Essex	1,864	5	31.7	.....	60	7	10	27†	34	4.08	.....	1.34	13.2	17	4	18	8	nw.	H. Van Hoevenberg.
Lauterbrunnen	Wyoming	1,260	1	43.0	.....	70	21	24	27	39	2.33	.....	1.33	1.5	12	8	5	17	sw.	J. O. Howard.
Lockport	Niagara	520	26	43.6	+ 4.8	71	21	24	11†	31	2.58	+ 0.21	1.12	3.0	8	12	7	11	sw.	R. N. Clark.
Lowville	Lewis	900	46	41.6	+ 7.1	66	22†	18	27	31	3.94	+ 0.50	1.02	4.5	13	7	16	7	w.	Prof. W. F. H. Breeze.
Moira	Franklin	200	13	39.8	+ 5.2	66	7†	15	28	32	2.62	+ 0.14	0.60	3.0	9	2	16	12	w.	C. E. McBride.
Nehasane	Hamilton	1,750	5	35.0	.....	61	7	12	15†	41	4.84	.....	1.28	10.3	15	9	10	11	nw.	L. W. Brown.
North Lake	Herkimer	1,822	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. F. Redmond.
Ogdensburg	St. Lawrence	175	29	40.1	+ 4.4	64	8	19	28	30	3.17	+ 0.63	0.90	3.5	9	7	13	10	s.	State Hospital.
Old Forge	Herkimer	1,733	5	36.6	.....	63	7	13	27	42	5.17	.....	1.65	5.2	13	14	5	11	w.	Mrs. S. W. Nelson.
Oswego	Oswego	335	43	44.1	+ 5.0	69	22	27	27	29	2.49	− 0.92	1.09	0.5	14	2	11	17	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. J. Winke.
Palermo	Oswego	460	54	.....	.....	.....	.....	.....	.....	.....	2.85	− 0.76	0.56	2.5	12	10	7	13	se.	Wm. A. Bartlett.
Perry City	Schuyler	1,038	33	39.2	+ 3.1	69	22	10	27	39	2.61	+ 0.01	1.68	0.4	11	4	5	21	s.	W. H. Jeffers.
Philadelphia	Jefferson	485	7	41.4	.....	66	23	18	12	31	3.33	.....	0.65	6.0	13	3	18	9	se.	E. D. Babcock.
Potsdam	St. Lawrence	300	37	39.4	+ 5.7	68	10	18	28	31	2.77	+ 0.55	0.85	2.0	9	.....	.....	.....	.....	A. E. Sutherland.
Ranger School	....do	1,750	0	36.4	.....	65	8	15	27	35	3.76	.....	0.90	0.5	9	11	3	16	w.	Prof. R. P. Prichard.
Raquette Lake	Hamilton	1,776	5	36.2	.....	60	22	14	28	35	5.45	.....	2.58	6.0	12	5	9	16	sw.	R. J. Dunning.
Rochester	Monroe	523	84	44.4	+ 6.5	72	21	27	11	31	1.95	− 0.81	0.95	0.3	13	6	4	20	w.	U. S. Weather Bureau.
Romulus	Seneca	719	21	43.6	+ 4.3	70	21†	22	27	32	2.01	− 0.43	1.74	T.	4	5	8	17	s.	John H. Coryell.
Shortsville	Ontario	740	14	44.6	+ 6.2	72	22	22	27	34	2.20	+ 0.36	1.35	T.	9	8	11	11	se.	C. H. Latting.
Skaneateles	Onondaga	.....	18	.....	.....	.....	.....	.....	.....	.....	2.98	− 0.31	0.75	.....	13	.....	.....	.....	.....	John Durkan.
Syracuse	....do	597	11	43.4	+ 4.7	71	22	23	27	30	2.03	− 0.67	1.03	1.7	15	2	9	19	sw.	U. S. Weather Bureau.
Tupper Lake	Franklin	1,522	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. A. W. Maddox.
Volusia	Chatauqua	1,167	14	41.4	+ 4.0	67	21†	20	10†	28	3.40	− 0.12	1.40	8.0	9	6	11	13	s.	Benjamin Breads.
Wanakena	St. Lawrence	1,600	3	36.6	.....	65	8	12	15	42	4.35	.....	1.50	0.5	7	12	4	14	w.	Prof. R. P. Prichard.
Watertown	Jefferson	540	21	42.0	+ 5.6	66	7†	21	12†	30	3.94	+ 0.53	0.70	4.0	12	11	12	7	sw.	H. P. Dunlap.
Wedgwood	Schuyler	1,430	24	41.9	+ 5.1	69	21†	20	27	34	2.56	+ 0.05	1.62	2.2	13	11	6	13	sw.	O. F. Corwin.
Westfield	Chautauqua	837	17	44.6	+ 4.4	73	21	23	10†	31	3.43	+ 0.01	1.33	5.0	12	3	20	7	.....	John R. Rogers.
York	Livingston	760	1	44.0	.....	72	21	24	27	41	2.29	.....	1.20	2.7	9	5	8	17	sw.	M. N. Stewart.
Vermont.																				
Burlington	Chittenden	404	5	40.2	+ 6.5	65	9	20	27	27	0.68	− 1.90	0.30	3.8	6	5	11	14	s.	U. S. Weather Bureau.
Cornwall	Addison	517	19	41.0	+ 4.9	65	10†	20	1†	32	0.87	− 2.39	0.35	3.0	6	11	6	13	s.	C. H. Lane.
Enosburg Falls	Franklin	601	21	38.5	+ 4.0	66	7†	15	27†	40	1.30	− 2.45	0.32	2.0	9	14	7	9	nw.	L. H. Pomeroy.
Hyde Park	Lamoille	576	1	38.1[a]	.....	67[a]	7	12[a]	27	47[a]	1.63	.....	0.75	5.0	9	9[a]	6[a]	14[a]	s.	A. V. Wiswell.
Northfield	Washington	876	26	38.0	+ 6.0	66	23	15	28	44	1.77	− 0.83	0.72	5.7	11	5	8	17	s.	U. S. Weather Bureau.
Wells	Rutland	750	20	38.0	+ 3.1	62	22	20	1†	23	1.66	− 2.08	0.53	4.5	8	6	11	13	s.	E. R. Pember.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 4, Lake Region.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Minnesota.																																
Cloquet	Lake Superior	.08							.03													.37	.09					T.		.21		0.78
Duluth	do		T.	.07				.02												.02	T.	.38	.04				T.	T.	T.	.21		0.74
Grand Marais	do			.15				.04														.40	.07							.52	.04	1.22
Stephens Mine	do																															
Two Harbors	do																					.18	T.							.15		0.33
Virginia	do																															
Wisconsin.																																
Appleton	Fox		.08				T.	.01	.28							T.				.80		.05	T.					.01		.36		1.59
Ashland	Lake Superior			.08				1.26	.05												T.	.39	.12							.43		2.33
Bayfield	do			.02				.55	.50											T.		.15	.02							.37	.09	1.70
Cecil	Fox		.13	T.			T.	.04	.35	T.	T.									.15		.10							T.	.10		0.87
Cornucopia	Lake Superior																															
Crandon	Fox							.20														.40	.02								.21	0.83
Florence	Menomonee							.39	.06		T.									T.		.42									.17	1.04
Fond du Lac	Fox		.04	T.				T.	.30										T.	1.02							T.	.08	.08		1.52
Grand River Locks	do		.06	T.			T.		.08										T.	1.00	T.	T.	.06				T.	.08	.10	.30	.04	1.72
Green Bay	Lake Michigan		.01	T.			.02	.06	.26							T.			.02	1.04	.01	.06	T.				.01	T.		.35	.07	1.91
High Falls	do		T.	T.			.05	T.	T.		T.									.50	.02	.21	.02		T.				T.	.34	.09	1.23
Iron River	Lake Superior																															
Kewaunee	Lake Michigan		.02					.06	.11	.05										.58										.21	.08	1.11
Manitowoc	do		.10	T.			.04		.30											.61	.05							.01		.32		1.43
Menasha	Fox							.03	.09											.76		.04	T.					T.		.05		0.97
Menomonee Falls	Lake Michigan							.10	.08		T.								.02	1.53			.06				.05	.02	.07	.25	.43	2.61
Milwaukee	do		T.	T.			T.	T.	.21	T.	T.					T.			.95	.37	T.		.01		T.	.03	.02	T.	.09	.49	2.17
New London	Fox		T.				T.		.23							T.				.80		T.						T.		.40	T.	1.43
Oconto	Lake Michigan		.09					.06	.40											.52		.12								.26	.08	1.53
Oshkosh	Fox		.12					T.	.20										.03	.55								.10		T.		1.00
Pine River	do		.07	T.			T.	T.	.18	T.	T.									.62	T.	.01						.08	T.	.34	T.	1.30
Plum Island	Lake Michigan			.50				.38												.49	.15									.50	.02	2.04
Plymouth	do		.07					.02	.40										.01	1.20							T.	.10	.02	.38	.09	2.29
Port Washington	do							.20	.10										.30	1.48			.30					.12		.20	.22	2.92
Racine	do								.15						T.	T.			T.	.70			.12	.05		T.	.02	.03		.17	.40	1.64
Ripon	Fox			.01					.30											1.02		.02					.01	.09	.01	.17	.04	1.67
Sheboygan	Lake Michigan		.20						.30	T.	T.								T.	.92	T.		.10				T.	T.	T.	.33	T.	1.85
Sturgeon Bay	do		.08	T.					.27	.09	.02	T.								.36	T.	.02								.31	.09	1.24
Superior [1]	Lake Superior			.04					.06											.02		.34	T.	T.					.01	.12	.07	0.66
Waupaca	Fox		.05					.03	T.							.04				.78		.11						.07		.38		1.46
Illinois.																																
Chicago	Lake Michigan								.07	T.	T.		T.	.02		T.		T.	.01	.02	T.	T.	.10			.11	.03		.21	.37	.53	1.47
Highland Park	do								.41		T.			T.		T.		T.	.02				T.				.04	T.	1.20	.29	.25	2.21
Indiana.																																
Auburn [1]	Maumee								.27	T.				.26	T.						.25										.49	.14	1.41
Berne	do							.06	.73	.08	.01			.23	.17	.07	.09						.02	.03			.10	.02	.04	.47	.67	2.79
Fort Wayne	do			T.				.41	.02	.06	.01		.10	.17	.02	.09			T.	.22	T.		T.			.03	.19	.02	.02	.38	.70	2.44
Hammond	Lake Michigan								.10	T.	T.				.10		T.			.05			.48				.14	.05		.36		1.28
Howe [1]	St. Joseph								.35		.30			1.03	.05	T.			T.	.03	.20	T.		.04			T.	.10	.04	.54	.21	2.89
Notre Dame	do							T.	.25	.50	.22	T.		.37		.01			T.	.02	.02		.29			T.	.04	T.	T.	.33	.20	2.25
Whiting	Lake Michigan								.03							.01			.01	T.			.25				.15	.01	.01	.28	.45	1.20
Michigan—Upper Peninsula.																																
Baraga	Lake Superior							.20	.40	.10	.10											.10										
Bergland	Ontonagon			.10				.51	.38		T.											.22								.18	T.	1.39
Calumet	Lake Superior			.28				.32	.52	T.	T.				T.					T.		.22	.03	.03				T.		.72		2.12
Chatham	do								.30	.30	.30									.50	.50	.50										2.40
Deer Park	do						T.	T.	T.		.60	.40						T.				T.	.10							.20		1.30
Eagle Harbor	do			.20				.30	T.		.30									T.		.20							.30		1.30
Escanaba	Lake Michigan		.02	T.			.01	.26	.24	T.	.09									.14	.01	.31	T.				.01		.45	T.	1.54
Ewen	Ontonagon			.10	T.			.62	.81	.19	.20											1.15	T.	T.					.24	.02	3.33
Grand Marais	Lake Superior		T.	T.			T.	.30	.30		.20			T.	T.							.05	.05						T.	.20	1.10
Houghton	do		T.	.14			T.	.87	.71	.09	.16			T.	.01					T.		.20	.13				T.		.57	.02	2.90
Humboldt	Escanaba								.30	.10	.50											2.00	.15									3.05
Iron Mountain	Menominee							.10	.15											.11		.38	.06								.09	0.89
Iron River	do							.25	.60	.40	.40									.30		.35	.60	T.					T.	.30	.40	3.60
Ironwood	Lake Superior		T.					.42	.71										T.		.45	T.								.27	.05	1.90
Ishpeming	Escanaba			.01	.01			.08	.60	.10	.50	.02			T.					.04		.32	.22						T.	.10	.05	2.05
Isle Royale	Lake Superior																															
Mackinac Island	Lake Huron			T.				.10	.05	T.	.10									1.00		.07	.19	T.							.03	1.54
Maple Ridge	Lake Michigan							.25	.30	.20	.40									.10		.45	.05								.40	2.15
Marquette	Lake Superior			.03				.08	.41	.09	.30				T.					.04	T.	.15	.18							.05		1.33
Menominee	Menominee		T.				T.	.14	.30											.45		.11								.32		1.32
Munising	Lake Superior			.12				.20	.87	.07	.53								.04	.17	.02	.26	.06	T.							.15	2.49
Newberry	Tequamenon		.02	.16	T.		T.	.18	.53	.10	.90	T.			.03					.25		.33			.04					T.	.24	2.78
Ontonagon	Lake Superior								.20																					.10		
Powers	Lake Michigan																															
St. Ignace	Lake Huron			T.					.05	T.	.10									1.00		.05		T.							.05	1.25
Sault Ste. Marie	St. Marys		T.	.20	T.	T.	.06	.30	.55	.03	.18	T.		T.	T.					.23	.07	.08	.02	.01	.04					T.	.30	.09	2.16
Seney	Manistique		.02	.24				.20	.30		.60																			.35		1.71
Thomaston	Lake Superior																															
Victoria	Ontonagon				T.				1.40	T.												.20								.39	.04	2.03
Watersmeet	do			.05			T.	.40	.32	T.	.07											.46	T.		.06	T.				.30	.07	1.73
Whitefish Point	Lake Superior																															
Michigan—Lower Peninsula.																																
Adrian	Raisin							T.	.38			.20		.60	T.				T.	.12						T.		.10		.45	.32	2.17
Allegan	Kalamazoo																															
Alma	Saginaw			T.					.30	.08	.48								T.	1.36	T.		T.			T.		T.		.10	.45	2.77
Alpena	Lake Huron			.07				T.	.25	.32	.67	.02							T.	.75	.01	.09	.31		T.					.26	.10	2.85
Ann Arbor	Huron			T.	T.			.03	T.	.01	.60	.02	T.	.19	.03	T.			.01	.22			.02					T.	T.	.41	.28	1.82
Arbela	Saginaw								.39	.20	.40	.20								.62			.31								.39	2.51
Armada	Clinton			.11	T.			.02	.43	.01	.36	.04		T.		T.		T.	.73	.06			.18	.04		T.	T.	T.		.05	T.	2.03
Battle Creek	Kalamazoo								.55	T.	.08	T.		T.			T.		.03	.22	.10			.70				.05	T.	.42	.22	2.37
Bay City	Saginaw			T.					.24	.30						.15			.15	.15		.05	.10								.49	2.48

TABLE 2.—*Daily precipitation for November, 1913. District No. 4*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Michigan—Lower Peninsula—Con.																														
Benzonia	Betsey		T.	.22				.08	.20	.02	.10								.01	.94	T.	.06	T.							.21	.10	1.94
Big Rapids	Muskegon			.04					.04										.10	1.35				.05						.05	.20	1.83
Bloomingdale	Lake Michigan						T.		T.	.05	.60		T.	T.	T.	T.			.20	.73			.30				T.	T.	T.	.20	.35	2.43
Cadillac	Manistee			.14					.03		.30									1.33			.10								.20	2.10
Cassopolis	St. Joseph																															
Charlevoix	Lake Michigan									.20	.20					.42																
Charlotte	Kalamazoo								T.	.10	.30							.12	T.	.20	T.		.08	T.						.35	.17	1.32
Cheboygan	Cheboygan								.30											.15											.45	0.90
Clinton	Raisin								.35	T.	.53			.25					T.	.12	.10		T.					T.		.30	T.	1.65
Coldwater	St. Joseph								.55		.15			.28	.04				T.	.05			.08				T.	.02		.53	.15	1.85
Croton	Muskegon		T.	T.				T.	.04	T.	T.	T.							.06	1.44	.08		.02	.03			.05	T.	.03	.02	.21	1.98
Detroit	Detroit			.02				.31	.04	.30	.06	T.		.18	.03	.03			.05	.31			T.				T.	.05	T.	.25	.13	1.76
Durand	Saginaw								.12	T.	.05								T.	.62			.11							T.	.30	1.20
East Tawas	Lake Huron		T.	.10					.20		.05									.65		.20	.02								.33	1.55
Eloise	Rouge			T.	.02			.01	.32	.04	.20	T.		.23		T.	T.		T.	.27	.02		T.					.03		.09	.08	1.61
Five Channels	Au Sable				.09				.22	T.	.10									.70		.08	.10	.15							.26	1.00
Flint	Saginaw				.04				.30		.50								.02	.70			.08	.04			.06	.03		.10	.30	2.17
Frankfort	Betsey								.48											1.20										.28		
Ganges	Lake Michigan			T.					.17		.40								.04	.54			.04				.01	T.		.29	.43	1.92
Gaylord	Cheboygan			.04				T.	.02		.74								T.	.72		T.		.03								1.55
Grand Haven	Grand		.02	T.				.01	.14	.07	.21								.77	.73	.01		.01			.03	T.	.01	.06	.21	.48	2.76
Grand Rapids	do		T.	.01			T.	.10	.03	.01	.08								1.32	.55	.01	T.	.04			.02	T.	T.	.04	.17	.48	2.86
Grape	Raisin			T.				.05	.27	.15	.35			.47	.03	T.			T.	.04	.03						.01	.02	T.	.12	.25	1.79
Grass Lake	Grand								.35		.35			.11	T.				T.	.24	.04		.05								.80	1.94
Grayling	Au Sable																															
Greenville	Grand								.01	.02	T.									.02						T.	.10	.01		.18	.31	0.65
Harbor Beach	Lake Huron			.05						.20	.15	.20							.20	.60											.20	1.60
Harrison	Saginaw																		.36	.27	.75											1.38
Harrisville	Lake Huron								.03		1.20									1.00		.01										
Hart	Pentwater		.35	.27						.10	.20								.30	.82			.36							.25		2.65
Hayes	Pigeon																		.12	.74		.08								T.	.16	1.19
Highland	Huron								.21	.42	.08					.24							.67				.11	T.	T.	.13	.55	2.41
Hillsdale	St. Joseph							.01	.39	.05	.60			.79		T.			T.	.07	.02		T.					.02		.52	.38	2.85
Holland	Lake Michigan		T.	.01					.10	.15	.20	T.		.12					.03	.95			.10				.10	.01	T.	.13	.25	2.15
Houghton Lake	Au Sable		.04						T.		.10	.04				T.				1.08			.16	.10		T.				.08	1.60
Howell	Saginaw			.01					.30	.02	.50			.05	.30	.01			.01	.69			.27			T.	T.	.02		.37	.17	2.72
Ivan	Manistee		T.	.25				T.	.10	T.	.15									.82			T.	.34		T.			T.		.10	1.76
Jackson	Grand			T.					.41	T.	.26			.04		.02			.02	.16			.26	.08		T.		.02		.56	.16	1.99
Jeddo	St. Clair			.06				T.	.24	.24	.85	.05							T.	.80	T.	.08	.12			T.				T.	.16	2.60
Johnnesburg	Cheboygan		.05	T.				T.	.23	.60									T.	.80		.02	T.	.12	T.	T.			T.		.30	2.12
Kalamazoo	Kalamazoo			T.					.50	T.	T.	.60		T.					T.	.40	T.		.50	T.			T.			.30	.25	2.55
Lansing (Agr. Col.)	Grand			.01				.21	.05	.32	.24			.01		.07			.08	.52	.01		.23				.02	.03	.06	.16	.36	2.38
Lansing (capitol)	do								.26	.05	.55	.05			.06		.08		T.	.55	.08	.04		.30			.04	.02		.14	.24	2.46
Lapeer	Saginaw																															
Ludington	Pere Marquette		.05	T.				T.	.25	.11	.10	T.							.18	.67	T.		.02				T.			.17	.13	1.68
Luther	Manistee		.04	.09					.08	.07	.08	.01							.01	.78	.05	.01	.10	.10			T.			.01	.22	1.65
Mackinaw	Lake Huron			.40					T.	1.20	T.									.20												1.80
Mancelona	Lake Michigan			.19						T.	.60									.76	T.											
Manistee	Manistee								T.	T.	T.									.58			.11							T.		0.69
Marshall	Kalamazoo																															
Midland	Saginaw		T.	T.				T.			.02								T.	.75							T.	T.	T.	T.	T.	0.77
Morenci	Maumee							.01	.42	.01	.10			.70	.12				.03	.06	.02								.06	.13	.30	1.96
Mount Clemens	Clinton			T.	T.			T.	.40	.14	.34	T.		.25	T.	T.			T.	.40			.25			T.	T.	T.		T.	T.	1.78
Mount Pleasant	Saginaw																															
Muskegon	Muskegon								.10	.20	.20									1.35				.10			.10			.05	.35	2.45
Old Mission	Lake Michigan			.14					.20	.10	.17	.01								1.10			T.							.52	.05	2.29
Olivet	Kalamazoo			T.					.48	.02	.11					T.			.03	.70	.01		.60					.04		.48	.33	2.80
Omer	Lake Huron							1.03											.02			.04		.02							.07	1.18
Onaway	Cheboygan		.20					.30			.20									.80		.15	.04	.24							.35	2.28
Owosso	Saginaw				.04				.26	.02	.22								.01	.61	.30	.04	.10	.05			.03	.01		.11	.23	2.03
Petoskey	Lake Michigan		T.						.10		.40									.10										.60		1.20
Plymouth	Rouge									T.				T.		T.				.25			T.							T.	T.	
Pontiac	Clinton			T.				T.	.45	.20	.20			T.		.10			T.	.55	T.	T.	.17	.24						T.	.35	2.26
Port Austin	Lake Huron				.04				.29	.15	.25									1.10		.11									.12	2.06
Port Huron	St. Clair		.01	.03				.25	.09	.39	.11	.01		.05	T.	T.			.04	.63	.02	T.	.16			.04	T.	T.		.02	.03	1.88
Reed City	Muskegon		.75	.07				.01	.03	T.	T.	.02							.16	1.05	.02	.03	.17	.23			T.	T.		.03	.30	2.87
Roscommon	Au. Sable			.01					.15		.10									1.15	.11										.11	1.63
Saginaw, East Side	Saginaw								.30	.20	.35	T.							.09	1.23	.10	.02	.03	.05		T.	.02			T.	.26	
Saginaw, West Side	do		.02	.02				.19	.09	.35	.17	T.							.11	1.16	.07		.09			T.	T.	T.		.17	.25	2.69
St. James	Lake Michigan		T.	.12				.28	.26	.06	.05									.34	.19		T.	T.							.40	1.70
St. Joseph	St. Joseph								.10										T.	.50			.30			T.	.03		T.	.36	.40	1.69
Sandusky	Lake Huron									.20	.40								.12	.44									.08			1.24
Saranac	Grand								.38		T.									1.10	.05		.04	.06						.17	.32	2.12
South Haven	Lake Michigan							.25	.20	.10	.10								.20	.35			.25							.75	.15	2.35
Thornville	Saginaw								.35	.45				.15				.25	.40	.10	.15		.28							.32		2.45
Traverse City	Lake Michigan								T.	T.	.30									1.25											1.10	2.65
Vassar	Lake Huron								.60	.50		.10								1.30											.65	3.15
Wasepi	St. Joseph							.20	.30		.20			.20					.06	.06			.26				.20	.07	.05	.54	.25	2.39
Weber Dam	Grand			.01					.24	T.	T.								.01	.97	.06									.25	.32	1.86
West Branch	Lake Huron								.40	T.	.10							.40		.70			.10	.45	T.						.35	2.50
Ypsilanti	Huron			T.				.03	.50	.03	.60	T.		.18		.05			T.	.23	.01		T.				T.	.03	T.	.41	.30	2.37
Ohio.																																
Akron ‖	Lake Erie	T.			.01				.42	.50	1.50	T.		.17	.24		T.			.01	T.						T.	.06		.05	T.	2.96
Antwerp	Maumee							T.	.45		.25			.20						T.								*	*	.80	.85	2.55
Benton Ridge	do							.04	.37	.30	.40	T.		.10	.12	.06		T.	.06	.02		T.					.03	.07		.45	.30	2.32
Bowling Green	Lake Erie							.21	.27	.20	.10	.05		.18	.12				.08	.14	T.						T.	T.		.40	.37	2.12
Bucyrus	Sandusky							T.	.60	.80	.60			.15		.05			.05	T.							.05	.10	T.	T.	.25	2.65
Cleveland (1)	Lake Erie			.03				.06	.28	1.48	1.48	.22	T.	.16	.06	.01			.04	.04	.01						.03	.03	.02	.03		3.98
Cleveland (2)	do			.03				.01	.24	1.55	1.06	.25	T.	.14	.10	.02	.02		.01	.08	.01						.04	.02	.01	.01	.02	3.62
Conneaut	do			T.	.10				.32	1.35	.85	.15		.52	.12				T.	.04	.05					.02	T.	.02		.01		3.55
Findlay	Maumee			.02				T.	.54		.06			.22	.10	.05	.02		.04	.06	.06		T.				.05	.02	T.	.45	.30	1.99
Fremont	Sandusky							.48			1.80	T.		.17	.09				.02	.02	.02									.45		3.05
Hedges	Maumee								.56		.30			.23	.16	.05				.18							.21	.06		.44	.05	2.24
Hillhouse	Lake Erie	T.		T.	T.				.23	2.00	1.25	.30	T.	.61	.10	T.			.02	T.	.04						.11	.04	T.	.10		4.80
Hiram	do			T.	.04				.20	2.02	1.12	.03		.29	.19	T.	T.		.08	.07	.04						T.	.08	T.	.10		4.26
Hudson	do			.02	.02			.02	.34	.80	1.40								.05	.05	.10								.03	.05		2.88
Lima	Maumee							.11	.57	.10	1.20			.05		.32			.05	.05			T.				.23			.28	.38	3.34
Medina	Lake Erie			T.				T.	.50	2.24				.17	.25	T.			T.	.13								T.	T.	.30		3.59

TABLE 2.—*Daily precipitation for November, 1913. District No. 4*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Ohio—Continued.																																
Montpelier	Maumee			T.				T.	.51	.10	.30			.47	.10	T.			.05	.20	T.						T.	.17	T.	.38	.93	3.21
Napoleon	do								.75				.18	.08		.06		.02		.13			.07			.03			.24	.08	.85	2.49
New Bremen	do							.10		T.	.25			.22	.37	.10			.01	.01							.20		.06	.27	.32	1.91
North Royalton	Lake Erie				.02				.42	1.20	.60			.50	.15				.10										.05	.15		3.19
Norwalk	do			.02	.03			.04	.50	.80	1.00			.16		.12			.13	.04	.02					.05		.05	.30	.04	3.30
Oberlin	do			T.				.19	.41	1.88	1.03	.06		.14	.08	T.			.16	.03	.08					.01	.04	T.	.20	T.	4.31
Ottawa	Maumee							T.	.65	.05	.02			.15	.13	.05			T.	.22	T.		.04				T.	T.	.08	.80	2.19
Sandusky	Lake Erie			.04				.42	.09	.63	.19	T.	.01	.14	.07	T.	.04		.07	.05			T.	T.		T.	.04	.03	.06	.32	.05	2.25
Tiffin	Sandusky			T.	T.			.18	.45	.20	1.40	.10		.10	.08	.03			.08	.05	.05		T.				T.	T.	T.	.39	.23	3.34
Toledo	Maumee			T.				.42	.01	.51	.15	T.	.04	.27	.10	T.			.01	.16	.03		.03				.08	.03	.04	.20	.46	2.54
Upper Sandusky	Sandusky								.92	.25	.28			.30	.60	T.		T.	T.	.10						T.	T.	T.	.20	.20	.40	3.25
Vickery	Lake Erie							.31	.47	.80	1.20	.10		.16	.08				.05	.02	.02						.05	.02	T.	.40	.15	3.83
Wapakoneta	Maumee							.10	.25	.22	.78			.14	.37	.05	T.		.03	T.				.03			.18	.01	.01	.27	.35	2.79
Wauseon	do			T.				.13	.50	.04	.07	.02	.01	.36	.09	.02			.03	.16	.07			.02		T.	.05	.04	.01	.37	.62	2.61
Wickliffe ‖	Lake Erie			T.				T.	.47	1.00	.20			.60	.08	T.			.05	T.	.02						.13	T.	T.	.17		2.72
Pennsylvania.																																
Erie	Lake Erie			.12	T.			T.	.24	1.59	1.26	.06		.58	.10	.01			.03	.10	.02	T.		.01	.02		.03	T.	.01	T.		4.1
New York.																																
Adams Center	Lake Ontario				.77					.96	.16	.60		.56	.17		T.		.05	.45	.87		.03	T.	T.				.10	T.		4.72
Angelica	Genesee				.11				.03	1.32	T.	.03		.13	.15		.02			.03	.02	.01		.02	.04	T.		T.	.04	.06		2.01
Appleton	Lake Ontario			T.	.30				.05	1.50	.12	T.	T.	.22	.07				.01	.68		.01		.02	.02		T.					3.00
Auburn	Oswego			.02	.15					.76	.49			.13	.20		.03			.06	.40	.01		.08	.11		.01					2.45
Avon	Genesee								T.	1.11		.05		.08	.05		T.			.26	.29	.03			T.		T.		T.			1.87
Brockport	Lake Ontario				.12				.02	1.02	T.	T.		.12					T.	.20	.34			.03	.11		T.					1.96
Buffalo	Lake Erie			.05	.01			.02	.12	1.06	.80	T.		.19	.09	.02	.02		.24	.66	.04			.04	.05		.02	T.		T.	T.	3.43
Canisius College	do			.10	.10				.28	.92	.84	T.		.26	.11	.01	.03	T.	.06	1.00	.07	.02		.14	.05	.02				T.		4.01
Canton	Grass			.07	.22				.14	.95	.01	.11		T.	.06				.04	.66	.03	T.	T.	.11	.03				.26		.03	2.72
Cape Vincent	St. Lawrence			.25					.10	1.25				.23					.10	.77				.20					.20			3.10
Chazy	Champlain																			.10					.02				.10			0.22
Chestnut Lawn	Genesee			.04	.17				.03	1.40	.02	.02		.14	.10	T.	.07			.02	.20	.04		.02	.08		T.	T.				2.41
Dannemora	Champlain				.05					.25	.30	.03								.01	1.02			.25		.15				.30	T.	2.36
Elba	Lake Ontario				.23				.08	1.08	.30	T.		.05	.16					.25	.32			T.	.09		.03		T.			2.59
Fayetteville	Oswego				.11				T.	1.21	.02	T.		.24	.21					.06	.32			.06	.07		T.		.02	.03		2.35
Gabriels	St. Regis			T.						.78	.02	.10		.07				T.	.30	.47		T.	.45		.10		T.		.22		.05	2.56
Geneva	Oswego			T.	.09					1.37	T.	T.		.18	.12		.10			.12	.20			.05	.16		T.		.02			2.41
Harkness	Champlain				.01					.42	.45				T.					.16	.10		T.	.05	.08				T.	.03		1.30
Hemlock Lake	Genesee		.07	.04					T.	1.34		.10	T.		.30	T.	T.		*	.34	.03			T.	.13		.06		.02			2.43
Hunt	do			.16						1.50					42		.32								15							2.55
Ithaca	Oswego			T.	.01					1.51	.01	T.		.21	.22	.06	.07			.07		T.		T.	.04	T.	T.		T.	.01		2.21
Keene Valley	Au Sable			.09	.15				.04	.65	.49	.08			.06					.15	.56				.06				.17	.14		2.64
King Ferry	Oswego									1.38				.24	.29		.06			.13	.15	T.		.07	.07							2.39
Lake George	Champlain				.07				.12	.81	.11									.26			T.	T.	T.	T.			.06	.26		1.69
Lake Placid Club	Au Sable	T.		.05	.21	.08				1.34	.31	.25	.05		.03					.41	.25	.08	T.	.41	.21	.05			.15	.05	.15	4.08
Lauterbrunnen	Genesee			.03	.15				.02	1.33		.02		.15	.09		.08			T.	.31	.07		.03	T.		.05	T.	T.			2.33
Lockport	Lake Ontario				.15				.12	1.12	.03	.01		.18	T.		T.		T.	.92		.05			T.		T.					2.58
Lowville	Black				.55					1.02	.51	.07		.04	.13				T.	.37	.81			.27	.04		.08		.04	.01		3.94
Moira	St. Lawrence				.60					.60	.09	.11		.02	T.					.45	.40				.05				.30			2.62
Nehasane	Black	T.		T.	.34					1.28	.32	.15	T.	.04	.13				T.	.55	1.12	.03		.30	.22	.02	.14		.08	.12		4.84
North Lake	do																															
Ogdensburg	St. Lawrence				.40					.90	.50	.25		T.					T.	.53	.30	T.	T.	.12	.07				.10		T.	3.17
Old Forge	Black				.46					1.65	.71	.33		.07	.10					.23	1.07			.19	.09		.13		.04	.10		5.17
Oswego	Lake Ontario			.05	.08				.04	1.07	T.	.05		.22	.07				.04	.44	.05	.02		.19	.16	T.	T.		.01	T.	T.	2.49
Otto	Lake Erie																															
Palermo	Lake Ontario				.23					.48	.47	T.	.18	.27		.06				.16	.56	T.	.03	.15		.21	T.		T.	.05		2.85
Perry City	Oswego				.07					1.68		.02		.20	.23					.07	.09	T.		.08	.11		T.		.02	.04		2.61
Philadelphia	St. Lawrence				.32					.65	.53	.25		.05	.10					.45	.48			.21	.11		.02		.14		.02	3.33
Potsdam	Raquette				.38					.69	.15				.10					.09	.85			.30			.04			.17		2.77
Ranger School	Oswegatchie			T.	.32					.90	.25	T.		.09	.16					.36	.78			.55	T.	T.			.35			3.76
Raquette Lake	Raquette				.12					2.58	.39	.16		.04	.16					.28	1.25			.10	.14				.12	.11		5.45
Rochester	Genesee			.02	.07				.02	.94	T.	T.		.06	.03	.02	T.		.09	.51		T.		.07	.09	T.	.02		.01			1.95
Romulus	Oswego									1.74				.09	.04		T.			.14					T.		T.		T.			2.01
Scottsville	do																															
Shortsville	do			T.	T.				T.	1.35	.02	T.		.07	.03		.08		T.	.16	.34			.08	.07		T.		T.			2.20
Skaneateles	do		.02	.27					.75	.42			.15	.13	.16		.05		.05	.61			.13		.21		.03					2.98
Syracuse	do			.06	.10				T.	1.03	T.	.01		.08	.11	.03	.05		.02	.28	.06	T.	T.	.03	.10		T.					2.03
Tupper Lake	Raquette																															
Volusia	Lake Erie				.24				.13	1.40	.25	.45		.52	.14				T.	.22	T.			T.	.05							3.40
Wanakena	Oswegatchie				.36					.90	.32									.35	1.50			.57	T.	T.			.35			4.35
Watertown	Black				.46					.70	.32	.32		.17	.13					.58	.62		T.	.40	.16		.02		.06			3.94
Wedgwood	Oswego				.06					1.62	.02	.05	T.	.11	.31		.07		T.	.02	.06	.02		T.	.08	T.		T.	.03	.11		2.56
Westfield	Lake Erie								.21	1.33	.39	.29		.37	.17				.05	.17	.27	.09			.06		T.			.03		3.43
York	Genesee								T.	1.20	T.	.10				T.	.01		T.	.25	.32	.07		.10	.15		.09		T.			2.29
Vermont.																																
Burlington	Champlain			T.	T.				.03	.28	T.	T.		T.	T.					.11				.05	.08	T.			.13			0.68
Cornwall	do				T.				T.	T.	.35	T.		T.	.10					.22					.06		.05		.09			0.87
Enosburg Falls	do			T.	.21				T.	T.	.05			T.						.23	.32	.01		.27	.06	.08			T.	.07		1.30
Hyde Park	do				.10					.15	.13				.01					.02	.75			.08	T.	.21				.18		1.63
Northfield	do				.09				.34	.52	T.	.01			.10					.40	.03	T.		T.	.07	.01	T.		.13	.07		1.77
Wells	do				.11				.05	.53		.04		T.	.12					T.	.37				.03		T.		T.	.41		1.66

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 4, Lake Region.*

Date.	Duluth, Minn.		Wisconsin.						Chicago, Ill.		Fort Wayne, Ind.		Michigan—Upper.								Michigan—Lower.					
			Florence.		Green Bay.		Milwaukee.						Escanaba.		Ewen.		Houghton.		Marquette.		Salt Ste. Marie.		Alpena.		Battle Creek.		Cadillac.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	49	24	50	25	49	26	46	27	46	29	44	23	54	24	51	23	50	31	55	31	46	28	48	27	45	28	45	27
2....	53	34	42	26	47	33	51	33	53	35	52	29	46	30	50	25	54	33	46	36	51	29	55	32	50	27	43	32
3....	45	27	44	32	49	38	52	42	56	42	58	43	47	36	40	26	51	32	44	33	48	35	51	37	53	30	47	39
4....	49	21	44	25	45	31	43	34	45	36	45	33	46	30	46	24	40	30	43	29	36	31	39	29	42	35	43	30
5....	55	35	38	29	50	30	54	32	55	37	56	28	48	27	48	27	61	32	64	39	55	24	54	28	54	24	51	29
6....	58	48	50	38	58	40	57	38	60	41	62	33	50	44	53	40	60	50	56	43	54	43	54	39	57	26	52	36
7....	48	29	53	46	59	48	63	44	65	44	61	49	50	46	55	36	54	29	52	33	52	44	57	49	61	29	55	45
8....	32	20	52	23	48	27	44	27	44	31	50	32	46	26	41	24	29	25	33	25	50	21	49	28	40	40	55	29
9....	33	12	25	19	30	20	32	23	33	26	32	26	27	19	28	21	25	16	26	18	24	17	29	22	28	26	30	20
10....	26	6	21	11	27	18	28	20	30	22	30	24	26	20	21	14	25	16	27	19	24	16	25	22	29	21	25	17
11....	35	14	35	15	34	18	40	19	41	20	35	23	35	20	38	5	36	22	34	20	32	20	31	24	35	23	30	22
12....	45	27	45	23	45	30	58	31	64	34	60	29	42	35	42	25	40	31	46	31	40	25	40	26	55	27	50	26
13....	37	18	43	28	46	31	52	37	58	45	62	45	47	30	37	25	39	32	45	29	44	28	48	30	56	29	46	29
14....	32	14	35	21	36	24	41	31	47	39	46	35	35	26	34	22	39	28	33	26	35	31	40	23	44	34	39	25
15....	36	21	33	12	36	27	44	34	44	42	37	34	34	22	36	8	38	20	36	23	35	27	34	26	39	30	34	22
16....	47	30	43	20	44	32	47	33	46	39	47	35	41	31	43	18	44	24	45	30	40	23	41	21	45	27	42	25
17....	60	33	.....	.....	44	36	49	35	55	38	47	35	43	34	66	35	52	38	56	37	43	38	47	33	48	27	42	25
18....	45	36	.....	.....	50	39	56	46	63	51	61	47	49	37	46	35	48	34	46	36	41	39	43	36	60	35	47	37
19....	45	29	58	24	48	39	65	51	67	61	64	58	47	37	48	34	46	34	50	36	46	39	53	38	62	45	57	41
20....	41	26	49	16	53	35	62	46	68	62	67	60	46	33	50	23	43	32	46	33	45	38	48	39	63	58	57	40
21....	62	37	58	39	66	52	70	53	72	62	70	56	62	45	59	40	63	42	62	46	63	40	65	43	68	56	63	48
22....	37	31	55	38	52	41	66	44	69	49	70	53	48	38	53	35	46	36	52	38	49	40	60	45	65	56	60	43
23....	41	25	43	29	45	31	50	36	50	39	53	34	43	33	45	28	46	35	46	34	40	33	47	36	45	40	60	34
24....	43	26	42	29	47	32	49	37	52	38	49	34	43	33	41	29	39	30	42	33	41	31	40	29	45	37	42	30
25....	53	37	54	27	51	35	50	37	51	41	49	29	58	35	55	27	51	30	59	34	50	28	53	28	45	28	49	30
26....	37	32	49	28	43	36	46	41	47	44	47	40	39	32	39	29	35	29	37	32	35	23	45	32	44	30	43	35
27....	38	32	36	27	40	36	43	39	46	44	46	40	39	34	37	27	36	27	38	29	34	22	37	32	41	35	35	29
28....	40	38	40	33	45	39	44	42	50	46	48	43	42	39	45	35	44	36	46	38	36	33	41	35	45	35	39	32
29....	43	35	41	36	46	40	53	43	59	47	56	47	44	38	42	37	44	37	44	39	39	39	42	39	52	40	40	36
30....	37	35	42	33	45	40	53	43	58	51	58	54	42	38	43	36	45	39	45	39	44	39	47	41	59	45	54	40
Mns..	43.4	27.7	43.6[b]	26.9[b]	46.0	33.5	50.3	36.6	53.1	41.2	52.1	38.4	44.0	32.4	44.4	27.1	43.8	31.0	45.1	32.6	42.4	30.7	45.4	32.3	49.2	34.1	45.8	31.8

Date.	Michigan.						Ohio.								Erie, Pa.		New York.								Vermont.			
	Detroit.		Muskegon.		Saginaw, west side.		Cleveland.		Lima.		Sandusky.		Toledo.				Buffalo.		Canton.		Rochester.		Syracuse.		Burlington.		Northfield.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	46	29	51	38	48	30	42	31	43	32	44	28	47	30	43	36	44	30	45	24	45	32	46	33	47	23	45	19
2....	49	30	54	40	49	30	48	31	41	24	49	29	50	29	48	36	47	35	45	34	51	36	49	39	41	31	41	26
3....	54	43	51	42	52	40	57	36	57	37	57	38	57	40	58	40	55	39	54	37	55	39	54	39	50	33	50	28
4....	46	34	49	38	43	30	50	41	55	34	47	35	49	35	49	40	48	36	45	27	50	34	50	34	49	31	50	30
5....	52	30	57	26	55	26	54	33	53	23	55	31	55	33	49	38	47	35	45	24	51	33	49	30	43	28	40	23
6....	58	37	56	26	57	32	65	37	63	29	66	36	64	38	66	38	63	42	57	37	66	35	66	36	57	32	63	19
7....	66	48	56	48	63	46	66	50	61	48	66	51	64	51	69	50	68	54	65	48	70	48	66	48	60	43	64	23
8....	54	33	56	31	53	29	57	36	55	35	57	35	53	37	56	41	56	43	66	49	58	45	61	50	64	42	54	30
9....	33	20	35	21	29	21	37	29	38	26	35	26	37	25	43	33	51	30	64	44	56	35	63	39	65	46	61	50
10....	28	19	33	26	28	20	29	22	28	23	29	23	32	22	36	25	32	26	50	29	35	27	39	27	56	29	51	30
11....	32	26	39	27	33	26	29	22	31	22	32	24	37	26	34	29	33	27	30	28	35	27	34	27	36	27	33	27
12....	46	27	53	29	47	24	46	20	50	23	47	21	50	23	47	26	46	30	42	23	47	30	46	31	40	29	39	28
13....	58	45	49	34	54	37	52	42	58	47	56	43	63	48	52	43	48	44	50	40	52	45	53	45	48	37	53	33
14....	48	34	48	34	43	31	49	37	56	38	47	38	48	35	49	38	46	35	40	30	45	36	53	33	50	33	53	32
15....	42	34	46	28	39	30	39	33	40	34	40	35	39	35	40	33	39	32	33	22	40	34	39	30	36	24	34	24
16....	43	31	46	27	44	27	40	34	45	30	41	34	40	30	41	36	37	32	36	27	39	34	35	30	36	24	38	22
17....	42	32	53	28	47	32	42	31	45	29	44	32	44	34	46	35	44	33	46	26	47	33	46	30	45	23	48	23
18....	55	37	53	41	51	41	53	40	60	38	56	42	58	40	51	40	48	41	46	42	53	40	52	35	51	38	54	27
19....	63	52	59	43	63	49	65	49	65	53	66	55	65	54	65	51	61	48	59	45	65	49	66	48	55	44	59	36
20....	62	57	59	39	58	44	63	60	69	58	65	60	64	60	64	56	53	48	58	36	61	49	61	46	61	42	65	42
21....	67	54	69	57	69	55	68	56	67	53	68	57	68	55	73	59	71	50	62	29	72	44	64	38	52	34	48	29
22....	69	54	61	51	66	48	72	59	70	56	73	60	72	59	72	60	66	58	65	59	71	58	71	60	62	50	66	47
23....	66	35	60	42	48	39	67	37	68	36	65	37	64	37	66	40	63	40	66	39	66	40	68	41	63	42	66	41
24....	45	33	59	38	44	30	43	37	51	35	44	37	48	36	42	36	43	34	40	33	43	33	42	32	42	34	42	32
25....	44	30	50	29	47	27	45	33	48	24	47	30	47	31	47	39	45	35	43	29	46	32	47	33	38	29	38	26
26....	46	40	46	39	45	35	46	41	44	40	46	42	46	40	45	40	46	33	42	24	46	33	47	27	44	28	43	27
27....	40	37	45	34	38	34	45	42	47	42	45	42	45	39	42	39	35	28	27	19	36	28	35	23	28	20	29	16
28....	46	38	47	34	44	35	48	41	52	44	47	41	46	41	46	38	46	35	33	18	45	34	38	29	33	20	30	15
29....	48	42	48	41	46	41	48	45	58	49	52	44	51	44	48	42	43	36	33	30	44	39	39	32	36	31	34	26
30....	58	48	55	45	57	45	58	47	59	51	60	50	58	50	55	43	52	36	40	23	48	39	46	37	42	30	37	24
Mns..	50.2	37.0	51.4	35.9	48.7	34.5	50.8	38.4	52.6	37.1	51.5	38.5	52.0	38.6	51.4	40.0	49.2	37.5	47.6	32.5	51.3	37.4	50.8	36.1	47.7	32.6	47.6	28.5

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 5, UPPER MISSISSIPPI VALLEY.

GEO. M. CHAPPEL, District Editor.

GENERAL SUMMARY.

November, 1913, in the Upper Mississippi Valley, was a month of rather remarkable character. The great outstanding feature was the month's mildness. Considering the district as a whole, only one November (that of 1899) in the 44 years' history of the Weather Bureau has been milder; but in some central sections the current month surpassed all previous Novembers for warmth. Other marked features of the month were the light snowfall and the great amount of damp, foggy weather.

The latter half of the month was remarkably mild, being probably the warmest period of such length at that season of the year on record in this district. By the close lawns and pastures as far north as Wisconsin were green as in the spring; moreover, some trees and shrubs were budding, and dandelions blooming. In North Dakota the month was especially pleasant, being regarded by many as the most agreeable November experienced since the State was settled. There fall plowing progressed with little interruption, and the soil that had frozen in October thawed, enabling thousands of bushels of potatoes to be harvested without much loss.

Storms of severity did not occur save in one or two instances, and in those the territory affected was not large. The great wind and snow storm that visited the Lake Region from the 7th to 10th affected but a small part of this district, viz, some of the Indiana area and extreme northeastern Wisconsin; the resulting snowfall amounted in some cases to from half a foot to a foot in depth. In the Indiana area this storm was the cause either directly or indirectly of three deaths.

To some extent the pleasant features of the month had their drawbacks. Colds and bronchial affections were reported to be more numerous than usual; merchants complained that business was injured and shippers of perishable goods experienced much difficulty. On the other hand, cement workers, builders, painters, etc., profited greatly from the favorable conditions.

The following table presents in condensed form the leading features of climatological interest for the various parts of the district:

Parts of States within district 5.	Temperature.				Precipitation.					
	Mean.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest total.	Least total.	Average snowfall.	Average number of days with precipitation.
North Dakota	33.5	+8.5	77	1	0.18	−0.40	0.68	T.	1.1	2
Minnesota	36.9	+8.4	69	−6	0.65	−0.34	2.07	0.04	0.7	4
South Dakota	37.9	+8.0	65	10	1.17	+0.41	1.17	1.17	1.0	3
Wisconsin	38.7	+6.9	70	4	1.53	−0.04	2.84	0.52	0.6	6
Iowa	44.1	+8.6	76	10	1.11	−0.39	2.42	0.24	0.3	7
Missouri	49.9	+7.0	77	15	3.05	+0.91	4.08	0.93	T.	8
Indiana	44.9	+4.9	71	10	2.75	−0.32	3.36	2.02	6.9	12
Illinois	47.6	+7.2	80	11	2.75	+0.04	5.52	0.76	0.1	8

TEMPERATURE.

The mean temperature for the district was 41.2°, or 7.9° higher than the normal. As has already been stated, of all Novembers in the history of the Weather Bureau, November, 1899, alone had a higher average temperature than the current month in this district. But the November of four years ago (1909) was somewhat warmer than that of the present year over much of the southern half of the district. Over an area in Iowa and southern Wisconsin, however, the current November was without exception the warmest month of that name on record. At Des Moines, Iowa, the mean temperature was 46.6°, or 0.8° higher than the mean of November, 1899, which was the warmest previous November at that station.

Over the entire district the average daily excess of mean temperature exceeded 7°, being greatest in North Dakota and elsewhere near the western boundary of the district, where it slightly exceeded 10°.

The first half of the month while milder than usual was not markedly so, the temperature averaging only a degree or two higher than the normal. But the latter half was a period of remarkable warmth for the time of year. The temperature was far above the normal almost every day, the daily departures being as much as +30° at some stations. At Des Moines, Iowa, this half of the month averaged 18° warmer than usual. The warmest weather of the month occurred on and about the 20th when the daytime temperatures were in the seventies as far north as northern Iowa. The highest temperature reported was 80° at two stations in southern Illinois. No records for high temperatures were broken at stations long established, but in some cases the record was almost equaled. Over much of the district the lowest temperatures of the month occurred on the 10th or 11th, but in parts of North Dakota and Minnesota the 14th was the coldest day. At many stations the month's lowest temperature was not so low as in October. The temperature fell to zero or below at only one station in the district, Itasca State Park, Minn., where a minimum of −6° occurred on the 14th. The fluctuations in temperature were unusually slight during the six closing days of the month, owing to dense cloudiness, high humidity, and little wind.

PRECIPITATION.

The average precipitation for the district was 1.45 inches, or 0.19 inch less than the normal. In the southern third of the district there was an excess of moisture, but this, as a rule, was not large. Over the remainder of the district, except in limited areas, the month's precipitation was deficient. In general the amounts increased from north to south, being lightest in North Dakota and heaviest in Missouri. Mexico, in the latter State, reported the grestest amount, 4.08 inches, while 4 stations in North Dakota had only traces. In North Dakota the precipitation of the month was much scattered in point

of time of occurrence, and there was an average of but 2 rainy days. On the other hand, in the Indiana area the average number of rainy days was 12, and after the 6th there were but 2 or 3 consecutive days at a time of fair weather.

Snowfall.—The month was notable for its light snowfall, the average for the district being only half an inch. The Lake region storm heretofore mentioned caused heavy falls in parts of the Indiana area and in extreme northeastern Wisconsin, but elsewhere in the district amounts of 1 inch or more were rare. Many stations in all parts of the district had no snowfall whatever. At Des Moines, Iowa, this was the first November of record without some snow. The greatest monthly snowfall was 12 inches, at South Bend, Ind.

RIVERS.

The rivers and streams of the district were either low for the season or near the normal stages, and the fluctuations through the month were slight. At the close no ice appeared in any of the streams, even in those of the far north.

MISCELLANEOUS.

The prevailing winds of the month were southerly or southwesterly over much of the district, and the movement was somewhat less than usual. The highest velocity was 52 miles an hour at St. Paul, Minn., on the 7th. The amount of sunshine was below the normal, except in North Dakota. The average number of clear days was 11, partly cloudy 7, and cloudy 12.

Thunderstorms occurred at some stations on the 7th and 21st in connection with the storms of those dates.

ERRATA.

Report for October, 1913. Mondovi, Wis.: Total precipitation published 2.96 should be 3.06. Springfield, Ill.: Number of days with 0.01 or more precipitation published 10 should be 12.

TABLE 1.—*Climatological data for November, 1913. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota.																				
Amenia	Cass	954	17	34.2	+ 7.9	65	17	9	14†	35	0.25	− 0.25	0.20	2.5	2	13	7	10	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	21	30.4	+ 8.2	61	5	5	14	44	0.25	− 0.45	0.08	.....	4	7	13	10	se.	H. F. Steinmeir.
Bowbells	Burke	1,950	1	31.4	.....	60	3	5	14	45	0.30	.....	0.13	.....	4	19	0	11	.....	G. H. Phelps.
Cando	Towner	1,488	12	31.2[h]	+ 6.0	60[h]	17	3[h]	15	43[h]	0.35	− 0.15	0.25	.....	2	.....	.....	.....	.....	E. T. Judd.
Crosby	Divide	.....	6	32.6‡	.....	57‡	5	11‡	1	42‡	0.18	.....	0.13	2.0	2	.....	.....	.....	.....	H. C. Kaschau.
Devils Lake	Ramsey	1,482	8	32.6	+10.0	59	5	10	14	32	0.17	− 0.54	0.14	0	4	10	12	8	s.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	14	32.7	+ 4.7	62[b]	16	4[b]	14	38[b]	0.68	+ 0.05	0.35	1.5	3	.....	.....	.....	sw.	C. J. Devore.
Dunseith	Rolette	.....	17	30.6	+ 5.6	58	5	1	14	40	0.17	− 0.18	0.08	0.5	3	13	7	10	nw.	C. E. Goodsell.
Eckman (near)	McHenry	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Yenny.
Fessenden	Wells	1,610	1	33.4	.....	65	5	5	14	43	0.08	.....	0.05	0.5	2	20	9	1	nw.	G. T. Seymour.
Forman	Sargent	1,249	21	38.0	+10.8	77	6	6	14	36	0.02	− 0.49	0.02	0.2	1	18	2	10	nw.	A. Maltby.
Grafton	Walsh	827	21	33.0	+10.5	62	17	2	14	40	0.07	− 0.57	0.05	0.3	3	14	6	10	sw.	A. R. T. Wylie.
Granville	McHenry	1,504	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Christianson.
Hannah	Cavalier	1,568	8	31.2	.....	60	5	2	14	34	T.	.....	T.	T.	0	.....	.....	.....	.....	J. Moffatt.
Hansboro	Towner	.....	5	32.0	.....	59	5	7	14	41	0.21	.....	0.17	.....	2	17	9	4	nw.	Geo. Dale.
Hillsboro	Traill	901	7	34.6	.....	63	17	9	14	36	0.30	.....	0.30	3.0	1	17	7	6	nw.	F. E. Mayall.
Lakota	Nelson	1,579	12	31.8	+ 9.4	62	5	4	14	35	0.27	− 0.51	0.25	0.5	2	10	14	6	sw.	C. R. Pettes.
Langdon	Cavalier	1,615	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Woolner.
Larimore	Grand Forks	1,134	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Freeman.
Lisbon	Ransom	1,091	9	34.6	+ 5.0	56	4	6	14	34	0.22	− 0.44	0.20	2.0	2	7	14	9	nw.	W. S. Adams.
McKinney	Renville	1,640	19	32.6	+ 9.4	67	5	4	14	48	T.	− 0.67	T.	0	0	11	14	5	se.	N. P. Swenson.
McLeod	Ransom	1,075	1	34.8	.....	61	17	11	23	35	0.10	.....	0.05	1.0	2	9	16	5	e.	Martin Reinholt.
Manfred	Wells	1,605	10	34.8	+ 7.4	61	5†	5	13	35	0.18	− 0.58	0.15	T.	3	14	7	9	nw.	P. B. Anderson.
Mayville	Traill	975	17	38.6	+10.8	64	18	7	14	37	0.16	− 0.51	0.12	1.0	4	19	5	6	.....	W. C. Gould.
Milnor	Sargent	1,097	1	.....	.....	.....	.....	.....	.....	.....	0.10	.....	0.10	1.2	1	8	10	12	s.	Hj. Edman.
Minot	Ward	1,557	17	35.2	+ 6.4	66	16	6	14	44	0.19	− 0.44	0.12	.....	3	24	0	6	w.	Louise Bates.
Minto	Walsh	820	20	33.4	+ 8.9	58	5	5	14	34	T.	− 0.56	T.	T.	0	14	5	11	s.	S. S. Marsh.
Oriska	Barnes	1,270	8	34.5	.....	63	17	8	14	31	0.15	.....	0.10	2.0	2	5	16	9	sw.	J. J. Taylor.
Park River	Walsh	998	9	33.9	.....	64	5	8	10	36	0.07	.....	0.04	0.4	2	12	12	6	nw.	G. M. Hargrave.
Pembina	Pembina	789	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Shumaker.
Power	Richland	1,020	21	35.8	+ 9.8	62	17	5	14	34	0.36	− 0.28	0.19	4.0	2	18	3	9	se.	J. A. Power.
Towner	McHenry	1,482	11	33.6	+12.5	60	5†	3	14	37	T.	− 0.50	T.	0	0	19	6	5	s.	B. Bagley.
University	Grand Forks	830	21	33.0	+ 7.7	62	17	6	14	33	0.45	− 0.28	0.17	1.5	6	8	11	11	se.	U. S. Weather Bureau.
Wahpeton	Richland	962	19	35.7	+ 8.9	62	7	9	14	35	0.22	− 0.45	0.20	2.2	2	15	4	11	nw.	Fred E. Smith.
Walhalla	Pembina	966	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ivanhoe Lee.
Westhope	Bottineau	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. A. Schwader.
Willow City	....do	1,471	21	31.2	+10.4	61	5	2	14	44	0.16	− 0.25	0.16	T.	1	13	10	7	w.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	22	40.4	+ 8.9	63	20	13	10	32	0.40	− 1.08	0.30	T.	2	10	15	5	se.	Edward Carey.
Alexandria	Douglas	1,391	19	36.2	+ 8.4	61	6	12	10	38	1.17	+ 0.45	0.75	1.2	12	15	6	9	nw.	P. O. Unumb.
Angus	Polk	870	11	32.9	+ 7.1	60	17	4	14	35	0.30	− 0.24	0.08	0.5	6	11	10	9	s.	John Nadvornik.
Bagley	Clearwater	.....	7	32.4	.....	65	17	3	14	36	0.04	.....	0.02	0.7	2	10	10	10	sw.	Jens Nelson.
Baudette	Beltrami	1,084	3	33.1	.....	58	17	6	10	38	0.40	.....	0.15	0.5	6	12	6	12	nw.	J. A. Gjelhaug.
Beardsley	Bigstone	1,090	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. L. Fitzgerald.
Bemidji	Beltrami	1,400	9	.....	.....	.....	.....	.....	.....	.....	0.14	.....	0.07	.....	4	.....	.....	.....	.....	C. W. Warfield.
Bird Island	Renville	1,039	23	39.3	+ 9.2	63	5†	14	10	38	0.31	− 0.52	0.17	T.	4	10	9	11	nw.	Dr. F. L. Puffer.
Brainerd	Crow Wing	1,215	7	36.4	.....	64	17	9	10	34	0.25	.....	0.21	0	3	10	6	14	e.	Theodore Miller.
Caledonia	Houston	1,179	20	40.0	+ 7.3	62	19	15	10†	32	2.07	+ 0.43	0.63	T.	5	11	1	18	sw.	W. D. Belden.
Campbell	Wilkin	975	7	34.5	.....	60	6	10	10†	35	0.11	.....	0.06	2.5	3	13	3	14	se.	J. T. Neisess.
Cass Lake	Cass	1,300	6	.....	.....	.....	.....	.....	.....	.....	0.29	.....	0.19	0	2	.....	.....	.....	.....	C. W. Burns.
Chatfield	Fillmore	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.82	.....	0.33	T.	5	16	4	10	sw.	G. A. Haven.
Collegeville	Stearns	1,242	20	37.7	+ 6.8	60	5	10	10	30	0.57	− 0.26	0.33	0	4	15	5	10	sw.	F. Tembreull.
Crookston	Polk	863	24	33.8	+ 8.6	59	17	9	14	29	0.24	− 0.46	0.20	2.0	2	11	7	12	s.	A. G. Andersen.
Detroit	Becker	1,364	17	32.6	+ 6.6	58	2	4	14	38	0.19	− 0.53	0.19	3.0	1	16	3	11	se.	G. W. Peoples.
Fairmont (near)	Martin	1,240	26	39.8	+ 8.6	63	20	14	10	30	0.85	− 0.42	0.21	1.0	7	8	10	12	s.	W. F. Wherland.
Faribault	Rice	1,003	15	41.1	+ 7.7	64	21	11	11†	34	0.18	− 0.89	0.06	T.	4	11	13	6	w.	C. F. Hyde.
Farmington	Dakota	902	25	39.4	+ 8.7	67	21	10	10	32	0.74	− 0.53	0.32	0.5	8	13	4	13	sw.	E. D. Akin.
Fergus Falls	Ottertail	1,210	21	36.2	+ 8.3	57	6	14	10	26	0.23	− 0.57	0.12	1.9	6	11	9	10	se.	C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	5	33.2	.....	59	5†	5	14	37	0.08	− 0.62	0.03	T.	3	17	0	13	s.	J. J. Tucker.
Fosston	Polk	1,289	3	31.4	.....	55	17	6	10†	28	0.56	.....	0.50	2.5	4	19	7	4	nw.	O. N. Hem.
Glencoe	McLeod	1,000	16	39.8	+ 8.0	61	5†	13	10	33	0.85	− 0.11	0.50	1.0	3	17	10	3	nw.	L. V. Koos.
Grand Meadow	Mower	1,338	25	40.7	+10.1	62	6†	10	10	33	1.53	+ 0.13	0.63	0	7	16	4	10	se.	C. F. Greening.
Gull Lake Dam	Cass	1,215	2	36.2	.....	64	17	13	11	33	0.84	.....	0.42	T.	4	12	6	12	nw.	U. S. Engineer Corps.
Hallock	Kittson	815	14	32.0	+ 6.5	60	17	5	10	39	0.20	− 0.42	0.10	1.5	3	19	0	11	s.	D. A. Robertson.
Halstad	Norman	870	7	31.8	.....	63	17	7	9†	37	0.23	.....	0.23	2.0	1	16	4	10	s.	A. G. Holstrom.
Hinckley	Pine	1,050	8	37.2	.....	65[a]	20	8[a]	10	33[a]	0.99	.....	0.35	0	6	6	7	17	ne.	W. R. Newman.
International Falls	Koochiching	1,112	10	33.6	+11.3	55	2†	4	10	35	1.14	− 0.21	0.56	.....	6	13	7	10	w.	J. T. Jaeger.
Itasca State Park	Clearwater	1,500	2	33.2	.....	66	17	− 6	14	36	0.09	.....	0.05	0	2	17	4	9	s.	J. A. Stillwell.
Lake Crystal	Blue Earth	990	5	40.4	.....	62	21	10	1	33	1.47	.....	0.70	1.0	5	11	7	12	s.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	25	34.1	+ 8.5	64	17	11	14	33	1.55	+ 0.51	1.20	1.0	6	13	7	10	s.	U. S. Engineer Corps.
Little Falls	Morrison	1,115	4	36.5	.....	59	5	9	10	29	0.33	.....	0.30	0	2	14	6	10	se.	Wm. Batters.
Little Fork	Koochiching	.....	3	32.7	.....	58	17	0	10	40	0.77	.....	0.20	3.5	5	11	9	10	.....	O. C. Olson.
Long Prairie	Todd	1,299	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Sheets.
Lynd	Lyon	1,175	20	38.8	+ 7.7	65	5	10	14	45	0.91	+ 0.04	0.75	1.0	3	14	4	12	sw.	J. W. Rouse.
Mankato	Blue Earth	758	15	.....	.....	.....	.....	.....	.....	.....	0.70	− 0.44	0.24	0.2	9	16	2	12	sw.	C. G. Staley.
Mapleplain	Hennepin	1,023	17	38.4	+ 8.0	65	21	11	10	28	1.26	− 0.03	0.65	0.6	7	13	3	14	se.	G. W. Richards.
Milaca	Millelacs	1,072	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Foss.
Milan	Chippewa	955	19	38.8	+ 9.7	64	6	13	10	37	0.81	− 0.10	0.45	1.0	4	12	7	11	nw.	O. K. Opjorden.
Minneapolis	Hennepin	918	22	40.2	+ 7.5	64	21	13	10	25	0.48	− 0.70	0.14	0.6	9	10	9	11	s.	U. S. Weather Bureau.
Montevideo	Chippewa	900	23	40.8	+10.2	67	17	12	14	37	0.60	− 0.26	0.40	1.0	6	12	10	8	nw.	L. G. Moyer.
Moorhead	Clay	935	32	34.7	+10.2	60	17	7	14	33	0.18	− 0.80	0.08	1.6	5	12	8	10	se.	U. S. Weather Bureau.
Moose Lake	Carlton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. Swanson.
Mora	Kanabec	1,001	8	37.1	.....	63	21	9	10	33	1.06	.....	0.36	T.	10	11	8	11	sw.	Hans Peterson.
Morris	Stevens	1,170	28	37.2	+ 9.0	60	6	12	14	30	0.86	+ 0.19	0.76	1.0	2	18	6	6	s.	D. T. Wheaton.
New London	Kandiyohi	1,215	19	40.8	+11.1	59	6	12	10	27	0.60	− 0.22	0.32	0	3	11	8	11	se.	Harold Swenson.
New Richland	Waseca	1,180	19	41.2	+ 8.9	61	21	13	10†	32	0.11	− 1.42	0.04	T.	3	12	10	8	sw.	N. O. Tyrholm.
New Ulm	Brown	791	33	40.4	+ 8.7	68	7	13	1	38	0.52	− 0.56	0.25	0.2	3	2	10	18	s.	A. L. Henle.
Osakis	Douglas	1,343	5	36.2	.....	58	5†	11	10	30	0.85	.....	0.48	0.2	5	13	4	13	s.	J. B. Johnson.
Park Rapids	Hubbard	1,426	23	32.6	+ 7.2	66	17	9	10†	33	0.34	− 0.65	0.11	1.2	5	11	6	13	s.	Dr. P. A. Walling.
Pierz	Morrison	.....	.....	36.5	.....	60	5†	9	10	32	0.91	.....	0.50	T.	3	12	5	13	w.	Dr. E. H. Kerkhoff.
Pine River Dam	Crow Wing	1,251	26	37.4	+10.6	68	17	8	10	35	1.03	+ 0.07	0.84	1.0	3	15	4	11	s.	U. S. Engineer Corps.
Pokegana Falls	Itasca	1,280	26	34.5	+ 9.8	67	17	4	10	38	0.87	− 0.32	0.66	0.2	6	16	1	13	sw.	Do.
Redlake	Beltrami	1,152	5	34.5	.....	55	5	9	14	33	0.14	.....	0.14	1.2	1	5	11	14	s.	A. C. Goddard.

TABLE 1.—*Climatological data for November, 1913. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Continued.																				
Red Lake Falls	Red Lake	1,001	....	37.8	.....	65	5	6	14	48	0.10	.....	0.10	1.0	1	16	4	10	nw.	E. G. Buse.
Red Wing	Goodhue	680	17	.....	.....	.....	.....	.....	.....	.....	0.92	− 0.72	0.50	T.	8	11	2	17	sw.	Louis Back.
Reeds Landing	Wabasha	681	17	.....	.....	.....	.....	.....	.....	.....	0.67	− 0.71	0.30	0	6	11	0	19	se.	John Deschneau.
Rochester	Olmstead	991	8	40.4	.....	65	21	12	10†	33	0.72	.....	0.46	0	6	13	4	13	s.	Mary P. Leslie.
Roseau	Roseau	1,040	3	32.0	.....	52	17	1	10	30	0.08	.....	0.08	0.8	1	10	13	7	se.	M. J. Hegland.
St. Charles	Winona	850	22	40.9	+ 9.6	63	21	12	10	31	1.14	− 0.11	0.43	0	5	13	4	13	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	36	38.6	+ 9.2	61	5†	12	10	27	1.23	+ 0.19	0.58	T.	5	12	3	15	se.	State Reformatory.
St. Paul	Ramsey	940	42	40.0	+ 9.1	64	21	14	10	28	0.56	− 0.74	0.20	0.3	8	7	9	14	s.	U. S. Weather Bureau.
St. Peter	Nicollet	825	18	39.5	+ 6.5	65	21	11	1†	38	1.40	+ 0.36	0.60	0	3	18	2	10	se.	State Hospital.
Sandy Lake Dam	Aitkin	1,234	20	34.8	+ 7.7	56	5	9	14	25	0.60	− 0.57	0.35	T.	4	8	12	10	w.	U. S. Engineer Corps.
State Sanatorium	Cass	1,336	5	34.1	.....	64	17†	8	10	46	0.69	.....	0.56	T.	4	13	5	12	sw.	Dr. G. W. Beach.
Stillwater	Washington	694	7	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.30	T.	4	15	0	15	s.	Oscar Ostrom.
Taylors Falls	Chisago	759	6	39.8	.....	62	21	12	11	30	1.01	.....	0.60	0.5	4	12	8	10	nw.	Minneapolis Gen. Elec. Co.
Thief River Falls	Pennington	1,137	2	33.8	.....	60a	17†	3	14	41a	.....	.....	.....	.....	....	15	1	14	.....	E. W. Lown.
Tracy	Lyon	1,403	....	41.2	.....	64	6	13	10	38	0.72	.....	0.36	1.5	3	12	12	6	s.	A. H. Rowland.
Warren	Marshall	859	1	35.4	.....	69	17	6	14	35	0.20	.....	0.20	2.0	1	0	20	10	.....	P. H. Holm.
Warroad	Roseau	1,069	3	33.4	.....	58	17	1	14	38	0.31	.....	0.10	0.5	4	18	3	9	s.	G. A. Sawyer.
Windom	Cottonwood	1,336	5	39.6	.....	61	5	13	14	41	0.40	.....	0.13	1.0	4	1	20	9	sw.	W. A. Peterson.
Winnebago	Faribault	1,100	15	41.2	+ 6.9	66	21	15	10	30	0.57	− 0.70	0.22	T.	3	18	4	8	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	25	32.5	+ 6.5	60	6	0	10	35	0.96	− 0.12	0.86	T.	5	16	2	12	w.	U. S. Engineer Corps.
Winona	Winona	700	17	42.3	+ 8.8	64	6†	15	10†	30	0.91	− 0.49	0.41	T.	6	15	7	8	sw.	P. C. Myers.
Winton	St. Louis	.....	....	34.7	.....	60	18	0	10	31	0.50	.....	0.50	T.	1	8	7	15	nw.	A. E. Johnson.
Worthington	Nobles	1,593	18	36.6	+ 5.3	56	5	12	10	31	0.50	− 0.58	0.30	2.0	3	14	2	14	s.	M. P. Mann.
Zumbrota	Goodhue	917	17	40.9	+ 9.0	66	19	11	10†	37	0.92	.....	0.46	0	6	16	5	9	sw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	22	37.9	+ 8.0	65	2†	10	14	38	1.17	+ 0.41	0.95	1.0	3	16	2	12	nw.	Miss Mary Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	19	36.8	+ 6.0	58	21	12	11	28	0.52	.....	0.30	0	3	12	0	18	sw.	Elton C. Larzelere.
Baraboo	Sauk	854	0	.....	.....	.....	.....	.....	.....	.....	1.48	.....	0.95	T.	7	5e	8e	12e	sw.	E. J. Curry.
Barron	Barron	1,115	22	37.1	+ 8.0	61	21	8	10	31	1.40	+ 0.09	0.45	T.	5	10	10	10	se.	Wm. A. Kent.
Beloit	Rock	750	47	43.6	+ 6.9	69	21	17	11	31	2.00	+ 0.03	0.62	T.	7	15	4	11	s.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	3	36.2	.....	59	17	9	15	35	1.86	.....	0.70	1.5	7	8	10	12	s.	Fred Hessen.
Brodhead	Green	812	15	42.8	+ 5.8	70	21	14	11	34	2.14	+ 0.18	0.90	T.	5	13	5	12	sw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	9	40.2a	.....	66a	21	15a	11	25a	1.65	.....	1.10	2.0	6	9a	8a	12a	sw.	George W. Smith.
Cottage Grove	Dane	888	2	.....	.....	.....	.....	.....	.....	.....	1.62	.....	1.23	0.1	6	12	8	10	sw.	John E. Mellish.
Darlington	Lafayette	867	7	41.2	.....	68	20†	12	11	37	2.25	.....	1.40	0	3	13	5	12	sw.	Sever P. Nelson.
Deerskin Dam	Forest	1,685	3	35.4	.....	59	21	8	15	36	1.93	.....	0.95	4.0	7	8	6	16	w.	Wm. E. O'Neal.
Delavan	Walworth	920	22	42.1	+ 8.6	70	21	14	11	30	2.66	+ 0.67	1.06	0.5	6	9	4	17	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,220	13	40.4	+ 6.3	67	20†	13	10	38	0.91	− 0.94	0.81	0	2	11	3	16	sw.	H. W. Jones.
Downing	Dunn	983	11	38.3	+ 8.5	66	26	10	11	36	0.90	− 0.39	0.50	0	3	8	3	19	se.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	22	39.8	+ 8.0	63	21	10	10	36	1.16	− 0.43	0.45	T.	6	11	9	10	w.	Robert D. Whitford.
Glen Flora	Rusk	1,475	1	36.4	.....	60	21	9	11	29	1.62	.....	0.61	1.0	4	9	6	15	nw.	G. A. Durgin.
Grand Rapids	Wood	980	14	38.8	+ 6.9	60	22	11	11	34	1.84	+ 0.23	1.03	T.	15	9	9	12	sw.	Geo. T. Nixon.
Grantsburg	Burnett	1,095	22	38.2	+ 8.0	65	21	9	10	30	0.55	− 0.86	0.34	0	2	17	4	9	s.	Chester Ahlstrom.
Hancock	Waushara	1,091	21	40.0	+ 7.3	64	21	13	11	27	1.20	− 0.21	0.55	T.	7	9	7	14	sw.	Frederick B. Hamilton.
Hatfield	Jackson	973	19	38.0	+ 6.3	63	21	8	11	41	2.84	+ 1.28	0.70	0	7	3	16	11	sw.	Wis.Ry.,Light & Powder Co.
Hayward	Sawyer	1,107	22	36.3	+ 7.4	63	17	10	10†	42	1.02	− 0.42	.....	0	2	8	14	8	w.	G. H. McElroy.
Hillsboro	Vernon	1,000	22	38.8	+ 6.5	65	21	10	11	35	1.77	+ 0.18	0.75	T.	8	11	9	10	sw.	Emil. V. Wernick.
Koepenick	Langlade	1,683	22	38.2	+ 7.5	63	22	14	11†	38	1.10	− 0.99	0.40	3.0	6	.....	.....	.....	sw.	Edward S. Kopenick.
La Crosse	La Crosse	714	41	41.6	+ 7.8	65	21	16	10	28	1.93	+ 0.41	0.59	T.	9	6	8	16	s.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	22	41.6	+ 7.2	69	21	17	11	29	2.77	+ 0.62	1.68	0.5	10	9	6	15	sw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	22	41.3e	+ 7.6	67e	20	14e	11	31e	1.55	− 0.17	0.80	0	5	7e	9e	11e	w.	Edward Pollock.
Long Lake	Oneida	1,592	5	35.3	.....	57	12†	4	15	39	1.40	.....	0.34	3.5	11	10	6	14	se.	Louis Frank.
Madison	Dane	974	44	41.9	+ 7.7	67	21	18	11	28	1.73	− 0.07	0.99	T.	8	8	8	14	sw.	U. S. Weather Bureau.
Marshfield	Wood	1,276	0	37.2b	.....	60b	21	12a	11	32b	1.33	.....	0.41	T.	8	1	10	19	nw.	Agr. Exper. Station.
Mather	Juneau	962	9	37.0	.....	61	19	11	11	34	1.61	.....	0.82	0	7	12	3	15	e.	Frank Evans.
Mauston	....do	882	17	40.4	+ 6.2	65	19†	15	11	28	2.30	+ 0.70	1.75	1.0	5	8	10	12	sw.	Eugene L. Hitchcock.
Meadow Valley	....do	974	22	39.3	+ 7.4	63	21	11	11	39	1.24	− 0.35	0.76	T.	5	4	15	11	sw.	Charles H. Johnson.
Medford	Taylor	1,420	24	37.2	+ 7.4	59	21	11	11	30	2.08	+ 0.55	0.68	0	4	11	11	8	s.	Wm. Zeit.
Merrill	Lincoln	1,267	7	35.0	.....	61	21	7	10	38	1.13	.....	0.30	T.	11	11	2	17	se.	O. F. Lueck.
Minocqua	Oneida	1,604	9	36.5	.....	60	17	12	10†	32	2.19	.....	0.63	T.	9	4	21	5	sw.	Benjamin W. Applebee.
Mondovi	Buffalo	738	5	40.4	.....	64	21	12	10	32	1.17	.....	0.45	0	13	14	2	14	nw.	Dr. Chas. Hebard.
Mount Horeb	Dane	1,226	9	40.6	.....	67	21	12	11	29	1.65	.....	0.90	0.2	5	17	3	10	s.	W. M. Lewis.
Muscoda	Grant	666	4	40.4	.....	67	21	13	11†	40	1.26	.....	0.86	0	5	17	0	13	sw.	Wm. Hessler.
Neillsville	Clark	996	23	38.2a	+ 7.2	62	20	12	11†	39	1.60	− 0.05	0.58	0	5	.....	.....	.....	nw.	Wm. Heaslett.
New Richmond	St. Croix	990	8	38.3	.....	65	21	9	10	32	0.77	.....	0.28	T.	4	10	11	9	sw.	Franc A. R. Van Meter.
Osceola	Polk	806	22	38.2	+ 8.7	65	21	11	10†	35	0.60	− 0.69	0.30	T.	4	11	9	10	s.	Charles W. Staples.
Park Falls	Price	1,492	22	34.8	.....	59	17†	8	11†	40	1.54	.....	0.53	1.0	8	11	0	19	s.	Flambeau Paper Co.
Portage	Columbia	809	24	42.6	+ 7.1	66	21	18	11	34	1.69	+ 0.13	1.10	0.5	9	14	0	16	sw.	James H. Martin.
Port Edwards	Wood	969	3	40.2	.....	63	2	11	11	43	1.02	.....	0.92	T.	2	14	5	11	sw.	Nekoosa-Edwards Paper Co.
Prairie du Chien	Crawford	628	22	42.5	+ 6.6	68	6	16	11	43	1.42	− 0.08	0.82	0	3	13	0	17	s.	James A. Gillis.
Prairie du Sac	Sauk	750	5	41.4	.....	68	21	14	11	33	2.05	.....	1.07	0.2	8	12	5	13	sw.	Wis. River Power Co.
Prentice	Price	1,551	15	36.2	+ 5.7	60	21†	6	11	30	2.16	+ 0.48	0.52	1.2	10	8	4	18	s.	Joseph G. Lash.
Reedsburg	Sauk	.....	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James Mulady.
Rest Lake	Vilas	1,600	0	36.0	.....	60	17	8	11	34	1.25	.....	0.60	0	3	9	0	21	s.	A. F. Miller.
Rhinelander	Oneida	1,550	7	36.8	.....	58	21	9	11	31	1.23	.....	0.48	1.5	8	14	1	15	sw.	Rhinelander Power Co.
Shullsburg	Lafayette	1,019	7	41.3	.....	67	20	12	11	35	1.77	.....	0.83	0	5	10	4	16	sw.	Harrison B. Chamberlain.
Solon Springs	Douglas	1,083	7	35.8	.....	63	17	8	11	34	1.35	.....	0.50	0.5	5	12	5	13	sw.	John M. Sayles.
Spooner	Washburn	1,104	19	36.9	+ 7.2	61	21	8	10	28	0.77	− 0.60	0.22	1.0	7	14	10	6	.....	Horace A. Bresee.
Stanley	Chippewa	1,082	9	37.7	.....	64	21	15	15	32	1.36	.....	0.52	0	5	16	4	10	se.	W. Humphrey Scott.
Stevens Point	Portage	1,113	20	37.8	+ 5.1	63	21	12	11	35	1.30	− 0.31	0.80	T.	2	2	9	19	sw.	Postmaster.
Sugar Camp Dam	Oneida	1,582	3	.....	.....	.....	.....	.....	.....	.....	1.02	.....	0.45	T.	3	13	10	7	sw.	C. W. Cheever.
Tomahawk	....do	1,451	0	37.6	.....	60	1	12	11	38	1.15	.....	0.50	0.5	5	15	0	15	s.	Victor Extrom.
Trout Lake	Vilas	1,400	1	37.4	.....	60	21	8	11	36	1.00	.....	0.70	0	4	8	9	13	w.	F. B. Moody.
Twin Lakes Dam	....do	1,625	3	.....	.....	.....	.....	.....	.....	.....	1.13	.....	0.43	7.0	5	15	0	15	w.	Albert D. Hansen.
Valley Junction	Monroe	930	21	39.2	+ 6.6	63	21	10	10	42	1.95	+ 0.26	0.65	T.	6	12	6	12	sw.	V. F. Gray.
Viroqua	Vernon	1,412	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Butt.
Vudesare	Vilas	1,700	5	36.6	.....	56	5†	6	11†	34	2.01	.....	0.54	6.0	6	13	12	5	w.	Louis L. Thomas.
Watertown	Jefferson	824	22	40.5	+ 6.7	67	21	16	11	29	1.89	− 0.05	1.20	0.5	10	12	7	11	sw.	Charles J. Salick.
Waukesha	Waukesha	864	22	41.0	+ 5.3	70	21	15	11	30	1.90	+ 0.01	1.53	1.0	7	9	11	10	sw.	Carroll College.
Wausau	Marathon	1,212	18	35.5	+ 3.5	62	21	14	11	30	0.88	− 0.80	0.24	0	10	12	1	17	se.	A. A. Babcock, jr.
Weyerhaeuser	Rusk	1,297	11	36.3	+ 6.7	61	21	10	10†	34	1.66	.....	0.56	0.5	7	9	9	12	sw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	22	40.5	+ 7.3	64	21	11	11	38	1.40	+ 0.09	0.40	0	6	11	8	11	s.	Hans J. Haugh.

TABLE 1.—*Climatological data for November, 1913. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Iowa.																				
Albia	Monroe	959	15	46.2	+ 7.5	74	20	17	1†	48	0.55	− 1.22	0.45	0	2	6	9	15	e.	J. I. Chenoweth.
Algona	Kossuth	1,213	39	42.2	+ 9.4	67	20	15	10	30	0.52	− 0.76	0.25	1.0	4	11	7	12	nw.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	22	41.2	+ 8.7	68	20	16	10	32	0.50	− 0.73	0.14	1.0	7	10	8	12	nw.	David E. Hadden.
Amana	Iowa	721	37	44.6	+10.8	71	20	15	11	32	0.80	− 0.93	0.51	0	8	11	7	12	s.	C. Schadt.
Ames	Story	926	37	46.2[x]	+12.1	75	20	15	11	39[x]									s.	Iowa State College.
Baxter	Jasper	998	13	44.8	+ 7.5	74	20	14	11	33	0.78	− 0.55	0.26	0.2	10	14	8	8	sw.	W. R. Vandike.
Belle Plaine	Benton	886	23	43.5	+ 8.6	71	20	11	11	32	0.92	− 0.80	0.40	0	5	9	7	14	se.	O. C. Burrows.
Belmond	Wright	1,184	3	42.2	.....	69	20	15	10†	32	0.94	.....	0.25	2.0	10	6	14	10	s.	Geo. P. Hardwick.
Bloomfield	Davis	881	6	48.2	.....	74	19	14	1	41	1.40	.....	0.80	0	7	15	5	10	sw.	Albert Power.
Bonaparte	Van Buren	.....	22	47.7	+ 9.2	76	20	16	11	37	0.86	− 0.94	0.50	0	6	.....	.....	.....	.....	B. R. Vale.
Boone	Boone	1,134	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Henning.
Britt	Hancock	1,236	16	41.1	+ 7.5	68	20	16	11	33	0.60	− 0.51	0.20	0.8	8	10	8	12	s.	L. M. Goodman.
Buckingham	Tama	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. S. Guynn.
Burlington	Des Moines	544	17	46.8	+ 7.1	76	21	16	11	37	0.89	− 0.89	0.24	0	11	15	4	11	s.	Max. E. Poppe, jr.
Carroll	Carroll	1,265	23	43.2	+ 9.0	71	20	17	1	41	0.95	− 0.18	0.43	0	4	14	0	16	sw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	31	44.4	+ 8.5	71	20	18	11†	43	0.53	− 0.87	0.29	0	2	15	0	15	s.	R. S. Toogood.
Charles City	Floyd	1,015	22	41.6	+ 8.6	66	20	15	10	31	1.01	− 0.38	0.40	0.4	9	8	10	12	s.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Oscar Stevens.
Clinton	Clinton	593	46	44.5	+ 8.8	72	20†	15	11	33	2.38	+ 0.54	0.75	0.3	6	12	4	14	sw.	W. E. Hennng.
Columbus Junction	Louisa	595	12	46.8	+ 7.8	75	20	17	10†	35	0.85	− 0.66	0.68	0	4	14	7	9	s.	J. B. Johnston.
Davenport	Scott	580	42	46.4	+ 8.9	73	20	20	10	32	1.26	− 0.50	1.14	T.	9	9	5	16	sw.	U. S. Weather Bureau.
Decorah	Winneshiek	875	20	43.3	+ 9.8	65	19†	14	10	31	2.14	+ 0.59	0.70	0	7	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Nettie E. Ball.
Des Moines	Polk	861	35	46.6	+ 9.8	73	20	20	11	31	1.03	− 0.45	0.45	0	10	8	8	14	sw.	U. S. Weather Bureau.
Dubuque	Dubuque	639	40	44.2	+ 8.2	70	20	19	10	27	1.23	− 0.58	0.56	T.	8	8	7	15	s.	Do.
Earlham	Madison	.....	11	44.0	+ 6.2	73	20	19	11	37	1.54	+ 0.20	0.91	0	5	12	5	13	sw.	George Phillips.
Elkader	Clayton	727	34	38.8	+ 5.6	66	20	12	11	32	1.69	+ 0.04	0.48	1.0	8	14	7	9	se.	Chas. Reinecke.
Elma	Howard	1,182	3	39.8	.....	64	21	10	11	30	1.41	.....	0.40	1.0	11	13	6	11	se.	H. A. Moore.
Estherville	Emmet	1,298	18	41.9	+10.6	60	2†	14	10	34	0.85	− 0.39	0.30	2.0	6	9	15	6	se.	A. O. Peterson.
Fairfield	Jefferson	780	29	47.4	+10.5	76	20	16	11	40	0.76	− 1.52	0.32	0	8	16	3	11	s.	R. M. KcKenzie.
Fayette	Fayette	1,003	23	41.6	+ 8.7	68	20	13	11	32	1.29	− 0.33	0.46	2.0	8	11	6	13	sw.	R. Z. Latimer.
Forest City	Winnebago	1,226	19	40.8	+ 8.4	69	20†	14	10†	35	0.67	− 0.56	0.22	0	5	12	6	12	s.	J. A. Peters.
Fort Dodge	Webster	1,126	13	43.9	+ 8.7	70	20	18	10	31	0.77	− 0.45	0.16	1.0	7	.....	.....	.....	sw.	J. F. Monk.
Fort Madison	Lee	516	64	.....	.....	.....	.....	.....	.....	.....	1.94	− 0.20	0.85	0	4	8	4	18	sw.	Miss L. A. McCready.
Gilman	Marshall	1,052	14	.....	.....	.....	.....	.....	.....	.....	1.17	− 0.23	0.46	0	5	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	22	41.8	+ 8.8	66	20	13	10	27	2.42	+ 0.86	1.00	1.0	11	10	7	13	sw.	F. L. Williams.
Grinnell	Poweshiek	1,023	21	45.7	+ 9.7	72	20	16	11	33	1.30	− 0.33	0.65	0	8	13	5	12	w.	D. W. Brainard.
Grundy Center	Grundy	976	22	44.4	+10.4	70	20	16	11	28	1.64	+ 0.42	0.46	0	7	13	4	13	s.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	18	45.3	+ 8.0	71	20	17	11	34	0.95	− 0.20	0.55	0	9	16	1	13	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	23	43.6	+10.2	69	20	16	10	30	1.20	− 0.36	0.33	0.5	8	7	12	11	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	25	42.3	+ 8.3	70	20	15	23	35	0.81	− 0.56	0.15	0	10	.....	.....	.....	s.	J. P. Peterson.
Independence	Buchanan	921	49	42.7	+10.1	69	20	13	11	32	2.31	+ 0.99	0.90	T.	10	14	4	12	nw.	R. E. Dudley.
Indianola	Warren	969	22	46.2	+ 7.9	72	20	20	10†	29	1.08	− 0.34	0.50	0	6	8	7	15	sw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	53	43.5	+ 7.8	74	20	14	11†	54	0.46	− 1.80	0.12	0	6	11	4	15	sw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	20	42.0	+ 8.9	70	20	15	11	31	0.75	− 0.50	0.18	0.5	6	13	4	13	sw.	J. B. Parmelee.
Jefferson	Greene	1,052	14	44.2	.....	73	20	16	11	37	0.93	− 0.38	0.51	T.	7	11	4	15	se.	Ora M. Hall.
Keokuk	Lee	614	42	49.4	+10.0	74	20	20	11	33	2.22	+ 0.37	0.76	0	11	8	8	14	s.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	21	45.6	+ 6.7	75	20	15	11†	54	0.24	− 1.26	0.16	0	4	10	8	12	.....	J. H. Landes.
Knoxville	Marion	920	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Casey and Belville.
Lacona	Warren	.....	14	.....	.....	.....	.....	.....	.....	.....	1.92	+ 0.45	1.10	0	10	5	17	8	.....	J. B. Alter.
Lansing	Allamakee	632	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. R. Serene.
Le Claire	Scott	576	13	.....	.....	.....	.....	.....	.....	.....	0.52	− 0.95	0.30	0.4	6	.....	.....	.....	.....	Miss M. T. Disney.
Marshalltown	Marshall	947	21	43.4	+ 7.4	73	20	11	11	50	0.82	− 0.47	0.42	T.	9	12	2	16	sw.	Jacob Eige.
Mason City	Cerro Gordo	1,132	16	41.5	+ 8.7	64	6	14	11	34	0.79	− 0.85	0.42	0	3	9	14	7	nw.	Dr. Roy Desart.
Monroe	Jasper	922	1	45.6	.....	72	20	16	11	36	0.88	.....	0.56	T.	3	11	6	13	s.	J. A. Dibel.
Mount Pleasant	Henry	729	32	47.0	+ 9.6	76	20	17	11	34	0.78	− 0.78	0.41	0	7	11	6	13	sw.	J. W. Edwards.
Muscatine	Muscatine	554	53	.....	.....	.....	.....	.....	.....	.....	0.24	− 2.06	0.07	.....	7	.....	.....	.....	.....	William Molis.
New Hampton	Chickasaw	1,169	16	41.4	+ 6.7	65	20	13	10	28	1.47	+ 0.07	0.64	T.	8	16	3	11	s.	A. F. Kemman.
Nora Springs	Floyd	1,064	.....	44.6	.....	70	19	15	10†	32	2.12	.....	0.69	2.0	12	14	5	11	s.	Arthur Betts.
Northwood	Worth	1,122	17	39.2	+ 6.2	63	20	13	10†	33	0.53	− 0.95	0.25	0.5	10	14	4	12	sw.	Chas. H. Dwelle.
Olin	Jones	760	15	44.7	+ 7.9	72	20	14	11	33	1.10	− 0.14	0.65	0	2	12	10	8	nw.	Dr. F. W. Port.
Osage	Mitchell	1,184	26	41.8	+10.9	65	20	14	10†	32	1.44	+ 0.01	0.50	0	8	13	5	12	s.	Lester Coonradt.
Oskaloosa	Mahaska	843	37	45.4	+ 8.4	73	20	15	11	31	0.51	− 0.98	0.33	0	5	15	15	0	sw.	Joseph Boyd.
Ottumwa	Wapello	649	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chester Potter.
Pella	Marion	877	11	46.6	+ 9.3	74	20	16	11	38	1.43	0.00	1.05	0	3	17	0	13	s.	J. H. Ver Steeg.
Perry	Dallas	975	12	45.7	+ 7.9	74	20	15	11	39	1.05	− 0.40	0.39	0	10	13	7	10	sw.	S. J. Brumfield.
Pocahontas	Pocahontas	1,248	9	42.0	.....	68	20	15	10	34	0.82	.....	0.38	1.2	9	11	5	14	s.	F. E. Hronek.
Rockwell City	Calhoun	.....	17	41.4	+ 6.4	69	23	21	9	43	1.60	+ 0.50	1.10	0	2	18	4	8	.....	C. M. Randall.
Sac City	Sac	1,278	37	41.2	+ 7.7	64	20†	17	10	24	0.98	− 0.13	0.20	0	8	8	1	21	sw.	E. N. Baily.
Saint Charles	Madison	1,070	12	46.8	+ 5.7	76	20	19	10†	38	1.58	− 0.15	0.78	0	12	13	5	12	nw.	R. D. Minard.
Sigourney	Keokuk	877	17	46.0	+ 7.1	68	18†	15	11	34	0.66	− 0.89	0.38	0	4	5	15	10	s.	J. T. Parker.
Stockport	Van Buren	745	11	47.0	.....	75	20	14	11	36	0.88	− 0.63	0.50	0	7	12	5	13	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	24	43.2	+ 7.1	63	20†	16	10	36	0.59	− 0.43	0.15	0	6	14	5	12	s.	Geo. H. Fracker.
Tipton	Cedar	807	14	45.2	+ 8.4	70	20	19	10†	28	1.42	− 0.40	0.62	0	4	12	10	8	s.	F. K. Gregg.
Toledo	Tama	856	19	45.4	+ 9.0	70	20	13	11	34	1.35	− 0.16	0.75	0	4	15	4	11	sw.	I. F. Giger.
Washington	Washington	769	31	46.8	+10.6	75	20	16	11	36	0.41	− 1.00	0.26	0	5	8	9	13	sw.	Wm. A. Cook.
Waterloo	Black Hawk	862	30	43.2	+ 7.5	69	20	16	10†	37	1.20	− 0.25	0.50	0	7	16	1	13	se.	Ralph B. Slippy.
Waukee	Dallas	1,039	10	.....	.....	.....	.....	.....	.....	.....	0.93	− 0.56	0.47	0	.....	.....	.....	.....	.....	Samuel F. Foft.
Waverly	Bremer	948	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Earl G. Moore.
Webster City	Hamilton	.....	8	43.8	.....	70	20	15	11	36	0.87	.....	0.26	2.0	5	6	3	21	nw.	C. D. Carpenter.
West Bend	Palo Alto	1,197	20	41.8	+ 9.3	67	20	15	10	31	0.64	− 0.70	0.22	0.9	7	11	7	12	s.	Phil Dorweiler.
Whitten	Hardin	1,036	16	46.0[d]	+10.7	71[d]	20	16[d]	10†	38[d]	1.89	+ 0.76	0.88	0	3	.....	.....	.....	nw.	Dr. F. P. Butler.
Winterset	Madison	1,129	22	45.8	+ 9.0	72	20	20	10†	29	2.24	+ 0.95	0.95	0	9	11	5	14	s.	Dr. R. S. Cooper.
Missouri.																				
Gorin	Scotland	700	27	.....	.....	.....	.....	.....	.....	.....	0.93	− 1.07	0.32	0	7	5	7	18	sw.	J. W. Pulliam.
Hannibal	Marion	534	22	50.6	+10.1	76	21	21	11	30	3.24	+ 1.29	1.94	T.	9	9	8	13	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	36	48.8	+ 5.4	77	21	15	1†	44	3.90	+ 1.66	1.50	0	8	15[a]	6[a]	8[a]	w.	J. T. Farrell.
Macon	Macon	881	1	50.8	.....	76	20	20	11	35	2.46	.....	0.95	0	7	10	5	15	sw.	John A. Cook.
Mexico	Audrain	797	36	48.6	+ 5.8	76	19†	19	11	53	4.08	+ 1.64	1.55	T.	10	11	2	17	s.	J. F. Llewellyn.
Palmyra	Marion	652	2	49.8	.....	73	20†	19	11	35	3.31	.....	1.76	0	9	9	8	13	s.	W. B. Markell.
Steffenville	Lewis	576	21	50.6	+ 7.6	77	20	17	11	36	2.65	+ 0.80	1.25	0	5	12	9	9	s.	Frank Hall.
Sublett	Adair	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lewis Spriggs.
Vandalia	Audrain	776	3	51.1	.....	77	20	23	11	43	3.00	.....	2.36	0	5	10	4	16	n.	C. B. Ellis.
Warrenton	Warren	865	24	49.0	+ 6.3	76	21	21	11†	53	3.85	+ 1.16	1.38	0	9	8	5	17	s.	Prof. J. H. Frick.

TABLE 1.—*Climatological data for November, 1913. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Indiana.																				
Collegeville	Jasper		14	45.6	+ 4.6	71	22	10	10	38	2.31	− 0.19	0.45	T.	9	11	2	17	sw.	John Zeller.
Knox	Starke	716	8	45.1	.....	69	21	12	11	35	3.25	.....	0.78	9.1	13	11	3	16	s.	W. R. R. Tatman.
Laporte	Laporte	810	17	43.8[b]	+ 4.1	69[b]	21	19[b]	12	37[b]	2.02	− 0.76	0.80	5.0	10	.....	.....	.....	.....	Wm. M. Walton, jr.
Plymouth	Marshall	790	8	44.4	.....	68	21	16	11	34	3.36	.....	0.81	8.4	14	10	6	14	sw.	J. W. Siders.
South Bend	St. Joseph	726	20	45.6	+ 6.0	70	21	20	11	30	2.80	− 0.02	0.77	12.0	14	8	8	14	sw.	Henry H. Swaim.
Illinois.																				
Aledo	Mercer	738	13	47.2	+ 8.5	73	20†	17	11	36	1.24	− 0.67	1.02	0	8	11	7	12	s.	William B. Frew.
Alexander	Morgan	670	20	49.6	+ 7.0	75	21	17	11	36	3.60	+ 1.47	1.69	T.	10	6	7	17	sw.	George H. Hall.
Antioch	Lake	861	12	43.0	+ 5.2	69	21	17	11	36	1.62	− 0.49	0.52	T.	4	10	6	14	sw.	J. C. James.
Astoria	Fulton	650	14	48.4	+ 7.3	75	21	17	11	37	2.75	+ 0.78	0.78	T.	8	10	7	13	s.	Edward V. Bohl.
Aurora	Kane	678	34	45.4	+ 7.8	71	21	15	11	38	1.74	− 0.68	0.80	T.	8	19	4	7	s.	Miss Alice M. Holden.
Bement	Piatt	685	6	.....	.....	.....	.....	.....	.....	.....	3.97	.....	1.25	T.	10	12	9	9	.....	J. W. B. Stewart.
Bloomington	McLean	840	22	48.0	+ 7.1	74	21	16	11	35	2.69	+ 0.10	1.09	T.	9	11	4	15	s.	Prof. H. N. Pearce.
Cairo	Alexander	359	41	54.1	+ 7.2	77	22	27	11	32	3.14	− 0.88	0.98	0	10	8	5	17	s.	U. S. Weather Bureau.
Camp Point	Adams	732	0	.....	.....	.....	.....	.....	.....	.....	2.28	.....	0.91	0	7	8	14	8	se.	Capt. D. M. Morris.
Carbondale	Jackson	445	8	53.2	.....	77	22	19	1	43	3.44	.....	0.60	T.	12	10	8	12	sw.	State Normal University.
Carlinville	Macoupin	663	23	50.2	+ 7.2	76	21	16	11	34	4.02	+ 1.39	1.76	0	9	10	9	11	sw.	Dr. J. D. Conley.
Carlyle	Clinton	470	28	.....	.....	.....	.....	.....	.....	.....	5.52	+ 2.20	1.50	T.	9	.....	.....	.....	.....	Hervey O. Jones.
Chester	Randolph	380	21	.....	.....	.....	.....	.....	.....	.....	3.39	+ 0.30	0.95	0	10	.....	.....	.....	.....	Charles S. Gollon.
Clinton	De Witt	727	3	47.9	.....	73	21	16	11	34	3.15	.....	0.68	T.	12	9	10	11	sw.	J. F. Ziegler.
Cobden	Union	656	30	54.9	+ 7.7	80	19†	21	11	38	3.47	− 0.67	1.00	0	9	14	2	14	s.	John Buck Co.
Dakota	Stephenson	929	8	42.8	.....	70	21	11	11	35	1.66	.....	0.55	T.	5	8	7	15	sw.	Elmer G. Smith.
Decatur	Macon	685	22	47.9	+ 6.3	74	21	14	11	50	3.68	+ 1.12	1.58	T.	11	11	7	12	sw.	Prof. J. H. Coonradt.
Dixon	Lee	725	23	43.1	+ 6.2	73	21	16	11†	49	0.76	− 0.94	0.35	0	4	.....	.....	.....	.....	H. U. Bardwell.
Du Quoin	Perry	459	25	52.4	+ 6.8	78	22	22	1†	41	3.24	+ 0.41	1.11	T.	8	15	6	9	sw.	G. H. Knetzer.
Dwight	Livingston	600	20	46.9	+ 7.1	72	21	14	11	38	2.06	− 0.44	0.72	T.	10	11	5	14	s.	Edward O. Welch.
East St. Louis	St. Clair	481	2	.....	.....	.....	.....	.....	.....	.....	3.50	.....	1.30	0	9	.....	.....	.....	.....	W. McK. Brown.
Edwardsville	Madison	554	14	.....	.....	.....	.....	.....	.....	.....	4.21	+ 1.01	1.94	0	8	.....	.....	.....	.....	W. H. Morgan.
Elgin	Kane	716	6	45.4	.....	71	21	17	11	36	1.49	.....	0.52	T.	7	6	8	16	sw.	Elgin Observatory.
Ewing	Franklin	449	1	.....	.....	.....	.....	.....	.....	.....	3.35	.....	1.20	T.	10	.....	.....	.....	.....	U. of Illinois Exp. Station.
Fairview	Fulton	733	2	.....	.....	.....	.....	.....	.....	.....	2.45	.....	0.74	T.	10	.....	.....	.....	.....	Abram Wilson.
Galva	Henry	842	21	46.4	+ 8.3	74	21	15	11	37	1.74	− 0.09	0.79	0.3	7	15	3	12	s.	Prof. F. U. White.
Grafton	Jersey	422	20	.....	.....	.....	.....	.....	.....	.....	3.52	+ 1.07	1.50	0	9	.....	.....	.....	.....	R. C. Goodrich.
Greenville	Bond	635	35	51.0[a]	+ 8.2	75[a]	20†	20[a]	11	36[a]	5.48	+ 2.10	1.43	T.	9	12	5	13	w.	H. W. Reidemann.
Griggsville	Pike	650	28	50.7[d]	+ 8.4	76[d]	21	21[e]	11	37[d]	.....	.....	.....	.....	.....	8	10	12	s.	George F. Kneeland.
Havana	Mason	475	21	48.7	+ 6.4	75	21	15	11	37	2.99	+ 0.86	0.75	T.	6	13	5	12	s.	L. L. Eutener.
Henry	Marshall	500	25	47.2	+ 8.1	75	21	15	11	36	2.09	− 0.27	0.67	T.	9	15	3	12	sw.	Dr. F. A. Powell.
Hillsboro	Montgomery	676	19	51.8[f]	+ 7.6	74[f]	21†	19[f]	11	30[f]	4.59	+ 1.91	1.24	0	8	.....	.....	.....	s	Sam Little.
Joliet	Will	609	22	45.1	+ 6.1	73	21	15	11	36	1.18	− 1.04	0.60	0.3	8	15	4	11	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	25	44.2	+ 6.9	71	21	16	11	33	1.96	− 0.27	0.54	T.	10	12	3	15	sw.	George Stevens.
La Grange	Cook	657	21	44.2	+ 5.7	73	21	16	11	35	1.71	− 0.58	0.59	T.	7	10	9	11	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	34	48.4	+ 8.2	76	20	14	11	38	2.43	+ 0.46	1.08	0	6	11	8	11	sw.	George E. Campbell.
Lanark	Carroll	883	24	43.6	+ 7.3	70	20†	11	11	34	1.32	− 0.67	0.52	1.0	6	16	3	11	sw.	M. N. Wertz.
La Salle	Lasalle	536	8	45.2	+ 7.4	74	21	18	11	48	1.32	− 1.32	0.40	0	5	9	9	12	nw.	H. A. Sohn.
Lincoln	Logan	575	25	48.4	+ 7.0	76	21	13	11	38	3.44	+ 1.11	1.08	T.	9	10	8	12	s.	Prof. C. S. Oglesby.
Macomb	McDonough	700	9	.....	.....	.....	.....	.....	.....	.....	2.71	.....	1.18	0	7	.....	.....	.....	.....	State Normal University.
Manteno	Kankakee	711	2	.....	.....	.....	.....	.....	.....	.....	2.47	.....	0.84	0	11	17	3	10	s.	C. B. Schmeltzer.
Martinton	Iroquois	632	26	46.6	+ 6.8	71	21	13	11	37	2.40	− 0.03	0.53	0	9	9	4	17	sw.	Joseph H. Peltier.
Mascoutah	St. Clair	425	23	52.3	+ 7.6	77	22	20	1†	39	3.90	+ 0.68	1.45	0	9	8	12	10	se.	Dr. Robert L. Lischer.
Minonk	Woodford	745	20	46.9	+ 7.0	73	20†	12	11	40	2.12	+ 0.16	0.56	T.	12	12	4	14	sw.	John C. Danforth.
Monmouth	Warren	784	21	47.4[a]	+ 7.1	74[a]	20	15[a]	11	40[b]	2.06	+ 0.20	1.04	0	8	13	0	17	s.	Dr. J. C. Hutchison.
Morris	Grundy	518	2	46.4	.....	73	21	14	11	37	2.09	.....	0.79	0	9	14	3	13	sw.	E. G. Cryder.
Morrison	Whiteside	685	19	44.8	+ 6.4	72	21	14	11	36	1.54	− 0.34	0.54	0	4	11	7	12	sw.	S. A. Maxwell.
Morrisonville	Christian	626	14	49.3	+ 6.1	73	21	17	11	36	4.21	+ 1.98	1.94	T.	9	11	7	12	s.	J. D. Lowis.
Mount Vernon	Jefferson	511	19	49.4	+ 4.0	76	19†	20	11†	48	3.84	+ 0.89	0.83	0	9	10	9	11	s.	Theodore P. Stelle.
Nashville	Washington	503	13	.....	.....	.....	.....	.....	.....	.....	3.98	+ 1.09	1.32	0	11	.....	.....	.....	.....	Harry E. Gewe.
Oregon	Ogle	702	4	.....	.....	.....	.....	.....	.....	.....	2.37	.....	0.80	0	6	11	6	13	s.	Samuel Ray.
Ottawa	La Salle	500	27	46.4	+ 7.0	77	19	17	11	36	1.80	− 0.55	0.86	0	7	11	0	19	sw.	Miss Maude M. Harris.
Pana	Christian	695	27	49.2	+ 7.0	73	21	17	11	33	4.40	+ 0.82	1.93	T.	7	8	7	15	s.	Julius Keefer.
Pawpaw	Lee	930	1	.....	.....	.....	.....	.....	.....	.....	1.78	.....	0.92	0.2	5	.....	.....	.....	.....	A. C. McBride.
Peoria	Peoria	609	57	47.2	+ 9.7	74	21	16	11	33	2.77	+ 0.13	0.81	T.	14	12	5	13	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	11	47.9	+ 6.4	74	21	16	11	36	1.58	− 0.43	0.52	T.	10	8	10	12	sw.	George Butterworth.
Quincy	Adams	481	7	49.2	.....	75	21	22	11	48	1.94	.....	0.89	0	8	.....	.....	.....	.....	Fred J. Brinkoetter.
Riley	McHenry	956	54	43.6	+ 8.9	70	21	14	11	33	1.73	− 0.26	0.45	0.2	10	8	7	15	sw.	John West James.
Roberts	Ford	774	2	.....	.....	.....	.....	.....	.....	.....	2.29	.....	0.90	T.	8	9	9	12	sw.	R. E. Bradbury.
Rockford	Winnebago	763	21	44.6	+ 8.5	73	21	16	11	33	1.52	− 0.89	0.41	T.	9	13	6	11	.....	Dr. John R. Porter.
Rushville	Schuyler	670	22	49.6	+ 8.8	75	21	19	11	37	3.35	+ 1.21	1.30	0	7	2	9	19	s.	H. F. Dyson.
St. Charles	Kane	700	18	45.4	+ 7.1	72	21	16	11	35	1.63	− 0.76	0.65	T.	7	10	9	11	sw.	Dr. William R. Bishop.
St. Peter	Fayette	500	11	49.9	+ 5.9	75	20†	19	11	34	5.07	+ 2.66	1.50	T.	9	7	9	14	sw.	M. L. Lansford.
Sparta	Randolph	538	27	52.4[d]	+ 7.3	80[d]	22	21[e]	11	36[d]	2.86	− 0.49	0.88	T.	12	15	4	11	s.	W. F. Clendenin.
Springfield	Sangamon	644	33	49.2	+ 8.5	75	21	23	11	32	4.49	+ 1.83	1.70	T.	13	9	7	14	s.	U. S. Weather Bureau.
Streator	La Salle	626	20	45.4	+ 5.2	75	21	15	11	53	2.30	− 0.01	0.51	T.	10	9	4	17	sw.	Miss Lora Sweetser.
Sullivan	Moultrie	530	13	49.0	+ 6.1	75	21	16	11	35	4.86	+ 2.16	1.95	T.	9	9	12	9	sw.	C. A. Corbin.
Sycamore	Dekalb	850	33	45.2	+ 8.8	72	21	13	10	40	1.23	− 1.11	0.49	0	8	.....	.....	.....	.....	George Valentine.
Tiskilwa	Bureau	798	29	.....	.....	.....	.....	.....	.....	.....	2.40	− 0.15	1.28	0.5	5	.....	.....	.....	.....	F. I. Smucker.
Walnut	....do	717	22	46.2	+ 7.1	73	21	14	11	35	1.76	− 0.17	0.92	T.	7	13	7	10	sw.	O. C. Nussle.
Warsaw	Hancock	501	15	.....	.....	.....	.....	.....	.....	.....	1.78	− 0.62	0.92	0	6	.....	.....	.....	.....	W. R. Kirkbride.
Waterloo	Monroe	719	2	.....	.....	.....	.....	.....	.....	.....	2.55	.....	1.24	0	9	.....	.....	.....	.....	Prof. James E. Raibourn.
White Hall	Greene	573	5	47.4	.....	74	22	20	1	45	4.74	.....	1.80	0	11	16	4	10	ne.	Frank Dilliman.
Windsor	Shelby	681	14	48.9	+ 6.7	74	22	15	11	36	4.28	+ 1.30	1.80	T.	8	9	6	15	s.	Herbert Rose.
Winnebago	Winnebago	900	26	43.5	+ 7.1	71	21	15	11	36	1.90	− 0.24	0.66	1.5	8	13	2	15	sw.	Frank Osborn.
Yorkville	Kendall	584	26	45.0	+ 8.3	71	21	13	11	36	1.58	− 0.79	0.76	0	8	12	6	12	s.	Herman A. Grimwood.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 5, Upper Mississippi Valley.*

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
North Dakota.																																
Amenia ‖	Red			T.				.08						T.	.05					.04			.02	.20						T.		0.25
Bottineau ‖	Mouse												.01							.05												0.15
Bowbells ‖	do				.10								.13	.02						.05												0.30
Cando	Sheyenne	.10																		.25												0.35
Crosby	Mouse						T.					.05							T.			.13										0.18
Devils Lake	Sheyenne		T.				.01												.14			.01							.01			0.17
Donnybrook	Mouse						.18					T.							.35			.15										0.68
Dunseith	do						.07						.02						.08			T.							T.		0.17
Eckman (near)	do																															
Fessenden ‖	James													T.						.03			.05									0.08
Forman	Sheyenne																						.02									0.02
Grafton ‖	Red						.01													T.		.01		.05					T.	T.		0.07
Granville	Mouse																															
Hannah	Pembina												T.						T.			T.										T.
Hansboro	Red						.17												.04													0.21
Hillsboro	do			T.															T.				.30						T.			0.30
Lakota	Sheyenne																		.25				.02					T.				0.27
Langdon ‖	Pembina																															
Larimore ‖	Red																															
Lisbon ‖	Sheyenne													.02		.20						T.										0.22
McKinney	Mouse											T.																				T.
McLeod	Sheyenne													T.		.05							.05									0.10
Manfred	do		.02									T.						.15			.01	T.										0.18
Mayville	Red								.01										.01		T.		.12							.02		0.16
Milnor	do															.10						T.						T.				0.10
Minot ‖	Mouse			T.				.03						.04						.12												0.19
Minto	Red		T.				T.												T.				T.									T.
Oriska	Sheyenne																.05					.10					T.	T.	T.			0.15
Park River	Red						T.									T.			T.			T.	.04					T.	.03			0.07
Pembina ‖	do																															
Power	Sheyenne	T.						T.						T.		.17							.19					T.				0.36
Towner	Mouse						T.												T.													T.
University	Red		.17				T.	T.								T.			.11		.02	.02	.06						.07	T.		0.45
Wahpeton ‖	do													T.		.20							.02									0.22
Walhalla	Pembina																															
Westhope	Mouse																															
Willow City	do						.16												T.			T.										0.16
Minnesota.																																
Albert Lea	Mississippi							T.													T.		.10						.30			0.40
Alexandria ‖	do			.11			.02	.06								.04				.02		.75	.08				.02	.02	.01	.03	.01	1.17
Angus	Red			.07			.02												0.6			.02	.05							.08		0.30
Bagley	do			T.				.02		T.													.02									0.04
Baudette	Rainy			.04				.06		T.				T.						.09		.01	.05							.15		0.40
Beardsley	Minnesota																															
Bemidji ‖	Mississippi			.01														.02											.07	.04	0.14
Bird Island	Minnesota							.17								T.						.09	T.				.03		.02			0.31
Brainerd	Mississippi							T.														.21					.01	T.	T.	.03		0.25
Caledonia ‖	do							T.	T.		.45					T.				.63		.22	.41				T.	T.	T.	.36		2.07
Campbell ‖	Red						T.							T.		.01								.04						.06		0.11
Cass Lake ‖	Mississippi																						.19							.10		0.29
Chatfield	do							.03								T.				.18		.24					.04	T.		.33		0.82
Collegeville	do			T.				.12														.33	.08				.04					0.57
Crookston ‖	Red			T.				T.	T.	T.										.04		T.		.20								0.24
Detroit ‖	do							T.						T.			T.							.19					T.			0.19
Fairmont (near)	Minnesota							.21								.10	.06		T.			.12					T.	T.	.09	.13	.14	0.85
Faribault	Mississippi							T.								T.			T.	T.	T.	.06					.04	.02		.06		0.18
Farmington	do			.05				.32								.02			T.	.02	T.	.18	T.				.05	.05	T.	.05		0.74
Fergus Falls	Red						T.	T.						.03		.04						.02	.12	.01					.01	T.		0.23
Fort Ripley ‖	Mississippi							T.								T.				T.		.02	.03	.03					T.	T.		0.08
Fosston	Red							T.						T.					.01			.02	.50							.03		0.56
Glencoe	Mississippi							.50								.10						.25										0.85
Grand Meadow	do							.18	.03										.07	.23	T.	.63				T.	.03	T.	T.	.36	T.	1.53
Gull Lake Dam	do							T.		T.						T.						.35	.42	T.			.02			.05		0.84
Hallock	Red						.05												.05				.10									0.20
Halstad ‖	do																						.23									0.23
Hinckley	St. Croix			.06				.33	.02													.35										0.99
International Falls	Rainy							.56												.10		.19	.05					T.		.23	.01	1.14
Itasca State Park	Mississippi																					.05								.04		0.09
Lake Crystal	Minnesota							.46								.10						.70							.10	.11		1.47
Leech Lake Dam	Mississippi							.03												.03		1.20	.20				T.		.01	.08		1.55
Little Falls	do																					.30	.03									0.33
Littlefork	Rainy							.15												.13		.20	.09							.20		0.77
Long Prairie	Mississippi																															
Lynd	Minnesota															.08						.75	.08									0.91
Mankato ‖	do							.03	.21							.06	.03					.19					.02	.03		.05	.08	0.70
Mapleplain	Mississippi			.15				.65						T.		.06				.01	T.	.22	T.				.15	T.	T.	.02	T.	1.26
Milaca	do																															
Milan	Minnesota							.11								.10				.15		.45					T.					0.81
Minneapolis	Mississippi			.04				.06					T.	T.		.05			.01	T.		.14	T.				.07	.01	.07	.03		0.48
Montevideo ‖	Minnesota							.10						T.		.02	.02			.40	.04						.02	T.				0.60
Moose Lake	St. Croix																															
Moorhead	Red						.01			T.				.04		.04						.01	.08							T.		0.18
Mora	St. Croix			.08				.35	.02							T.						.15	.36				.02	.04	.01	.02	.01	1.06
Morris	Minnesota			T.			T.	T.								.10						.76					T.					0.86
New London	Mississippi							.08														.32	.20			T.	T.	T.	T.	T.	T.	0.60
New Richland	Minnesota							.04								T.		T.	T.		T.	.03				T.	.04		T.			0.11
New Ulm	do							.24								.03			T.	T.		.25					T.					0.52
Osakis	Mississippi			T.				T.		.11						.05					T.	.48	.03	T.						.18		0.85
Park Rapids ‖	do													.02						.01		.11		.10						.10		0.34
Pierz	do		.31					.10								T.						.50										0.91
Pine River Dam	do							T.								T.						.84	.14						T.	.05		1.03
Pokegama Falls	do			.02				T.												.01		.66	.01						.02	.15		0.87
Redlake	Red																					T.	.14					T.	T.	T.	T.	0.14
Red Lake Falls ‖	do																						.10									0.10
Red Wing ‖	Mississippi		.02	T.					.20								T.					.26	.24	.02			.03	.03		.12	T.	0.92
Reeds Landing ‖	do								.20													.24	.06				.04			.07	.06	0.67
Rochester ‖	do								.03													.46					.05	.06		.10	.02	0.72
Roseau	Red							T.												T.	T.		.08							T.		0.08
St. Charles	Mississippi							.16												.13		.36					.06			.43		1.14

TABLE 2.—*Daily precipitation for November, 1913. District No. 5*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Minnesota—Contd.																																
St. Cloud	Mississippi							.58		T.				T.		T.				T.	T.	.22	.26				.05	T.	T.	.12	T.	1.23
St. Paul	do			.04				.16								.02			T.		T.	.20	T.				.06	.01	.04	.03		0.56
St. Peter	Minnesota							.60													.50						T.			.30		1.40
Sandy Lake Dam	Mississippi							T.												.06		.35	.05				T.		T.	.14		0.60
State Sanatorium	do							T.												.03		.56	T.				T.		.05	.05		0.69
Stillwater ‖	St. Croix							.30	T.								T.					.25		.02			T.			.20	T.	0.77
Taylors Falls	do			T.				.60								T.						.24					T.	.07		.10		1.01
Thief River Falls ‖	Red																															
Tracy	Minnesota							.36								.14						.22	T.				T.					0.72
Warren	Red																				T.		.20									0.20
Warroad	Rainy													T.					.10			.05	.07							.09		0.31
Windom	Des Moines							.13								.10						.12							.05			0.40
Winnebago ‖	Minnesota			T.				T.	.22		T.					T.	T.					.13		T.					T.	.22		0.57
Winnibigoshish	Mississippi			.02			.01	.01												T.		.86	T.							T.	.06	0.96
Winona	do		T.					.07	.06										T.	.13	T.	.41	T.				.03		T.	.21	T.	0.91
Winton	Rainy				T.			T.															T.							.50	T.	0.50
Worthington ‖	Des Moines							.30								.13						.07										0.50
Zumbrota	Mississippi							.18													T.	.46	T.				.05	.03	.03	.17		0.92
South Dakota.																																
Milbank ‖	Minnesota							T.	T.					.07		.15						.95					T.	T.				1.1
Wisconsin.																																
Antigo ‖	Wisconsin						T.		.30											.02			.20					T.	T.	T.	T.	0.48
Baraboo	do						T.	T.	.03							T.			.12	.95		.08					.12	.04		.14		1.52
Barron	Chippewa			.24				.33	T.							T.						.45					.21			.17		1.40
Beloit	Rock			T.				T.	.50					T.					.10	.62		T.					.04	.03	T.	.28	.43	2.00
Big St. Germain Dam	Wisconsin			.11			T.	.41	T.	T.	.15									T.		.70	T.	.08				T.		.35	.06	1.86
Brodhead	Rock								.35					T.		T.				.90						T.	T.		.17	.27	.45	2.14
Burnett	do		T.	T.			T.	.02	.20							T.		T.	*	1.10	T.	T.				.07	T.	.10	T.	.16	T.	1.65
Cottage Grove	do								.02										.04	1.19		.09							T.	.16	.12	1.62
Darlington	do																			1.40										.25	.60	2.25
Deerskin Dam	Wisconsin			.07			T.	.21	.40	T.	.10									.10		.95	T.	T.						T.	.10	1.93
Delavan	Rock								.31		T.			T.		.07				1.06	T.		T.			T.		.63	.19		.40	2.66
Dodgeville ‖	do																				.81	.10						T.				0.91
Downing	Chippewa							.20								T.				T.	T.	.50	T.				T.	.20	T.	T.	T.	0.90
Eau Claire	do		T.	T.				.18						T.		T.				.06	T.	.37					.06	.04		.45		1.16
Glen Flora	Chippewa							.46														.61						.15		.40		1.62
Grand Rapids ‖	Wisconsin	T.	.03	.01	.01	T.	T.	.09	.08	T.									.02	1.03	.12	.13	.10	T.	T.	.02	T.	.08	.04	.05	.03	1.84
Grantsburg	St. Croix							.34														.21	T.	T.			T.			T.		0.55
Hancock	Wisconsin		.10					.05	T.									.05		.55	T.	.20					T.	.10	T.	.15	T.	1.20
Hatfield	Black		.20					.20											T.	.38		.44					T.	.50		.42	.70	2.84
Hayward	St. Croix								*													1.02										1.02
Hillsboro	Wisconsin		T.	T.			T.	*	.13		T.					T.			*	.75	T.	.37				T.	T.	.10	T.	.27	.15	1.77
Koepenick	do							.40	.20													.20	.10				.10			.10		1.10
La Crosse	Mississippi		T.				T.	.05		T.						T.		T.	.45	.13	T.	.59	T.			.01	.09		.02	.52	.07	1.93
Lake Mills	Rock							.02	.09		T.								.22	1.68			.12				.02	.06	.02	.03	.51	2.77
Lancaster	Mississippi																			.80		.12					.05			.13	.45	1.55
Long Lake	Wisconsin			.07			.02	.27	.26		.02									.08		.34	.09		.02			T.		.05	.18	1.40
Madison	Rock		T.	T.			T.	.01	.11		T.					T.			.99	T.		.02				T.	.02	.01	T.	.11	.46	1.73
Marshfield	Wisconsin		T.	T.			T.	.11	.01											.39	.03	.28						.09	.01	.41		1.33
Mather ‖	do		.15					T.	T.											.82		.09	.12				T.	T.	.11	.30	.02	1.61
Mauston	do								.10											1.75		.20					.10			.15		2.30
Meadow Valley	do								T.										.76			.18					.05	.05	T.	.20	T.	1.24
Medford ‖	Black			T.	T.				.45		T.											.40								.55	.68	2.08
Merrill	Wisconsin		.07	.09	.02			.08	.21	T.	T.											.30	.11	.05				.06		.04	.10	1.13
Minocqua	do			.22			.06	.43	.10										.06			.53		.13				T.		.63	.03	2.19
Mondovi	Mississippi	.01					.01	.12	.04				.01			T.				.03	.01	.39	.01				.04	.02		.45	.03	1.17
Mount Horeb	Rock								.02							T.			.16	.90										.17	.40	1.65
Muscoda ‖	Wisconsin							T.	.13											.86		.05					T.			.15	.07	1.26
Neillsville	Black		.12					.30													.50								.58	.10		1.60
New Richmond	St. Croix			.27				.28	T.												T.	.14					.08			T.		0.77
Osceola	Wisconsin			.05				.30				T.				T.						.20					.05	T.	T.	T.	T.	0.60
Park Falls ‖	Chippewa			.10				T.	.53	.03	.05	T.							T.	T.		.22	.10	.09	T.			T.		T.	.42	1.54
Portage	Wisconsin			.03			T.		.12	.03						T.		T.	T.	1.10	T.		.03			T.	.05	.08		.05	.20	1.69
Port Edwards	do							T.			T.									.92		.10				T.	T.	T.	T.	T.		1.02
Prairie du Chien ‖	Mississippi								.08											.82		T.					T.	T.		.52		1.42
Prairie du Sac	Wisconsin		.07						.12										.28	1.07		.03				T.			.03	.23	.22	2.05
Prentice ‖	Chippewa			.07	.02			.03	.52	T.		.06							T.	T.	.02	.40	.45						.11	T.	T.	.48	2.16
Reedsburg	Wisconsin																															
Rest Lake	do	T.							.60												T.	.59	T.	.06				T.				1.25
Rhinelander	do			.05					.48		.01										.08		.36					.14		.06	.05	1.23
Shullsburg	Mississippi								.15											.83		.11					T.	T.	T.	.12	.56	1.77
Solon Springs	St. Croix		T.	.30				T.													T.	.50	.30	T.			.05	T.	.20	T.		1.35
Spooner	do			.18				.22												.10		.13		.03	T.		.07			.04		0.77
Stanley	Chippewa		T.					.15	.10												T.	.52					T.	.14		.45		1.36
Stevens Point	Wisconsin		T.				T.	T.												.80		.50					T.	T.	T.	T.	T.	1.30
Sugar Camp Dam	do			T.			T.	.22	T.		T.									T.		.45	T.					T.		.35		1.02
Tomahawk	do							T.			.05											.50	.10							.30	.20	1.15
Trout Lake	do			.09					.20																		.01			.70		1.00
Twin Lakes Dam	do		T.				T.	.20	.30	.10	.10										T.	T.	.43					T.			T.	1.13
Valley Junction	do	.20						.30												.65		.20								.40	.20	1.95
Viroqua	Mississippi																															
Vudesare	Wisconsin			T.				.50	.47	.07	.07											.54		T.						.36	T.	2.01
Watertown ‖	Rock		.03					.09	.12	T.									.05	1.20							.12	.06	.02	.05	.15	1.89
Waukesha	Fox							.02	.10											1.53	.02							.06		.13	.04	1.90
Wausau	Wisconsin			.06	T.			.03	.15											.20		.05	.24		T.		.02	.03	.03	T.	.07	0.88
Weyerhaeuser	Chippewa			.07				.34		T.				T.		T.				.10		.56	T.				.12	T.	T.	.46	.01	1.66
Whitehall	Mississippi							.20												.30		.40	.10				.10	T.	T.	.30		1.40
Iowa.																																
Albia ‖	Des Moines						.45									.10																0.55
Algona	do															.05						.25	T.				T.	.17		.05		0.52
Alta ‖	Raccoon							T.	.13							.09						.14	.02				.01			.10	.01	0.50
Amana	Iowa							.06	.01					T.				T.	.01			.02				T.	.03	.07		.09	.51	0.80
Ames	Skunk																					.60				.02	.02	T.	T.	.05		
Baxter	do							.02						T.		.01			.03		.01	.20	.01			.04	.03			.17	.26	0.78
Belle Plaine	Iowa													T.				T.	T.	.08	T.	.03					T.	.08	T.	.33	.40	0.92
Belmond	do		T.					.09								.25			.23	T.	T.	.02				.09	.06	.04	.02	.05	.09	0.94

TABLE 2.—*Daily precipitation for November, 1913. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***Iowa*—Continued.**																																
Bloomfield	Mississippi								.06						.17							.04					.05	.06	.22		.80	1.40
Bonaparte	Des Moines								.02							.20	T.		.03							T.	.08		.03		.50	0.86
Boone ‖	do																															
Britt	Iowa							.20								.08			.08	.05		.13				T.	.04	.01	T.	.01	T.	0.60
Burlington ‖	Mississippi													.24		.23	.03		.03	T.	.01	T.	.07				.11	.03	.04	.07	.03	0.89
Carroll ‖	Raccoon														.18						.13				T.				.21		.43	0.95
Cedar Rapids ‖	Cedar								T.										T.	T.		T.						T.	T.	.29	.24	0.53
Charles City	do						.03								.04				.20			.40				.04	.04		.04	.06	.16	1.01
Clear Lake	do																															
Clinton	Mississippi						T.	.30							.03			T.	.73	.39						T.	T.		T.	.18	.75	2.38
Columbus Junction	Iowa						.02	T.								.10			T.	T.	T.					T.	T.	T.	T.	.05	.68	0.85
Davenport	Mississippi						.07	.07				T.	T.			T.		T.	.05	.01			T.			T.	.01	.01	.01	.01	1.02	1.26
Decorah	do						.05	.07								T.			.15	.64		.70			T.	T.	T.		T.	.38	.15	2.14
Delaware	do																															
Des Moines	Des Moines					T.	.03						T.	.01				.01	.02		T.	.12				.05	.01	T.	.04	.29	.45	1.03
Dubuque	Mississippi					T.	.15	T.					.01					T.	.23	.20		.03				T.	.02	T.	.03	.56	1.23
Earlham	Raccoon						.07	.01														.19							.36	.91	1.54
Elkader	Mississippi						.30									.06				.30	T.	.15				T.	.05	.05		.48	.30	1.69
Elma	Wapsipinicon						.10									.05			.07	.20	.02	.33				.05		.12	.02	.40	.05	1.41
Estherville ‖	Des Moines						.25	.05								.05						.30	T.					.05	T.	.15		0.85
Fairfield	Skunk						.08									.18		T.	.04	.03						T.	.03	.03	.05	T.	.32	0.76
Fayette	Mississippi						.14									.14			.46			.15				.02			.01	.10	.27	1.29
Forest City ‖	Cedar						.20												.22		.15		T.				T.		.05	.05		0.67
Fort Dodge ‖	Des Moines								.15							.10			.08	T.		.16				.11	.05	.12	T.	T.	T.	0.77
Fort Madison	Mississippi												T.			T.							.85				.12		.27		.70	1.94
Gilman	Iowa						.09							T.					T.			.12							.08	.42	.46	1.17
Grand Meadow	Mississippi								.30							.10		.05	1.00	.07		.15				.02	.03	.02		.57	.11	2.42
Grinnell	Iowa						.04											T.	.05	.02	T.	.07	T.				.07	.04	T.	.65	.36	1.30
Grundy Center	Cedar						.46												.05			.13				T.	T.	.10	.10	.42	.38	1.64
Guthrie Center	Raccoon						.05							.01				T.	T.			.12				.09	.05	.01	.01	.06	.55	0.95
Hampton	Cedar						.10									.05			.13		.33					.07	.04		.15		.33	1.20
Humboldt	Des Moines						.12											.05	.08			.15				.08	.08	.03	.03	.10	.09	0.81
Independence	Wapsipinicon					T.	.05	.15								T.		T.	.35	.15	T.		.08			T.	.06	.02	.07	.90	.48	2.31
Indianola	Des Moines						.05								T.	.02						T.	T.			.03	.03	T.		.45	.50	1.08
Iowa City ‖	Iowa								.07							T.			T.	.10							.03	.07	.12	T.	.07	0.46
Iowa Falls ‖	do								.18							.05					.09	.17					.09	T.	T.	.17	T.	0.75
Jefferson	Raccoon						T.			T.			T.	T.		.07		T.	T.	T.		.16				.08	.03		.05	.03	.51	0.93
Keokuk	Mississippi						T.						.18	.01	.08	.15		T.		T.			.76			.08	.02	.09	.35	.04	.46	2.22
Keosauqua ‖	Des Moines								T.						T.	.16			T.								.02	.03			.03	0.24
Knoxville	do																															
Laconia	do						.18										.02	.03				.05				.01	.02	.03	.09	.39	1.10	1.92
Lansing	Mississippi																															
Le Claire ‖	do								.29	.01					T.				T.	.05			.01				T.	T.		.09	.07	0.52
Marshalltown ‖	Iowa								.08							T.			T.	.04		.12				.01	.05	.03	.01	.42	.06	0.82
Mason City	Cedar																		.25			.42								.12	0.79
Monroe	Skunk							.03								T.		T.	T.				T.			T.	T.	T.	T.	.56	.29	0.88
Mount Pleasant	do							T.	.03				T.	T.		.17			.06								.05		.03	.03	.41	0.78
Muscatine ‖	Mississippi								.03							.02			.02	.07							T.	.04		.02	.04	0.24
New Hampton	Wapsipinicon							T.								T.		T.	.24	.08	T.	.14				T.	.05	.01	.05	.30	.10	1.47
Nora Springs	Cedar							.05								.32		.04	.41		.01	.69				.05	.11	.04	.17	.05	.18	2.12
Northwood	do							.03								.05		T.	.02	.05	.25	T.				T.	.02	.05	.02	.03	.01	0.53
Olin	Wapsipinicon							T.							T.			T.				T.					T.	T.	T.	.45	.65	1.10
Osage	Cedar							.11								.08			.21	.08		.50					.22		.05	.19		1.44
Oskaloosa	Des Moines							.02							.05						.02					T.			.09		.38	0.51
Ottumwa	do																															
Pella	do							.01							T.			T.	T.			T.					T.	T.		T.	1.05	.37	1.43
Perry	Raccoon							.05						T.					.01	T.	.01	.13					.10	.06	.01	.03	.26	.39	1.05
Pocahontas	do															.12			.02	.01	.02	.38					.03	.02			.18	.04	0.82
Rockwell City	do			T.													T.					1.10									.50	1.60
Sac City	do			T.				.13								.16		T.	.06	.03	.02					T.	.12		.06	.20	.20	0.98
St. Charles	Des Moines							.05	.01						.02			T.		.01	.01	.20				.04	.02	.01	.03	.40	.78	1.58
Sigourney	Skunk							T.											T.	.12	T.	T.					T.		.13	.03	.38	0.66
Stockport	Storm Lake							T.	.05							.17		T.	.04							T.	.04	.05	.03		.50	0.88
Storm Lake	Raccoon							.15								.06	T.		.02			.15				T.				.12	.09	0.59
Tipton	Cedar													T.					.27	.31							T.	T.	.22	T.	.62	1.42
Toledo	Iowa							.10												.05										.75	.45	1.35
Washington	Skunk							.08							.03												.01			.03	.26	0.41
Waterloo ‖	Cedar								.10							T.						.07					.01	.07		.35	.05	1.20
Waukee	Raccoon														.10															.36	.47	0.93
Waverly	Cedar																															
Webster City	Des Moines							.19								.20			T.			.26				.09	T.	T.	T.	T.	.13	0.87
West Bend	do							.07								.09			.03			.22				.04			.14	.05		0.64
Whitten	Iowa							T.						T.					T.			.38				T.				.63	.88	1.89
Winterset	Des Moines							.08					T.	T	T.			.01	.03	T.		.13	T.			.06	T.	.02	.03	.95	.93	2.24
Missouri.																																
Gorin	Mississippi								.03				.08		.05	.09							.08						.28		.32	0.93
Hannibal	do							T.			T.			.16	1.37	.64		T.		.02		.24				.10	T.	.03	.20	T.	.48	3.24
Louisiana	do													T.	1.05	1.50	.08	T.	.07	.10		.45					.23		T.	T.	.42	3.90
Macon	do														.25	.95	.01	T.								T.	.09		.60	.01	.55	2.46
Mexico ‖	do								.18					T.	1.30	1.55	.06		.02	T.	T.			.57			.04		.12	.06	.18	4.08
Palmyra	do														1.76	.05	.02				.04		.89				.08	.02		.19	.26	3.31
Steffenville	do	T.						T.						T.	T.	1.25		T.		T.			.40				.20		.50		.30	2.65
Sublett	do																															
Vandalia	do															2.36				T.			.38							T.	.26	3.00
Warrenton ‖	do								.05						1.38	1.38	.05										.27		.04	.24	.12	3.85
Indiana.																																
Collegeville	Iroquois								.23	T.				.45		.23	.10			.30	T.		T.				.13	T.	.10	.45	.32	2.31
Knox	Kankakee			T.				.45	.15	.48	.30			.35	T.	.05	T.		T.	.22	.05		.12				.21	.01	T.	.45	.41	3.25
Laporte	do								.20	.40	.05							.05	.03		.04		.80				.10			.30	.05	2.02
Plymouth	do			T.				.29	.28	.67	.19			.39		.06	.04		.02	.21	.05		.03				.07	T.		.81	.25	3.36
South Bend	do							.06	.21	.77	.38			.15	.05	.01			.04	.07	.05		.32	T.			.11			.31	.27	2.80
Illinois.																																
Aledo	Mississippi							T.	.07					T.		.03			.03							T.	.01	.03	.02	.03	1.02	1.24
Alexander	Illinois							.05	.01					T.	.62	1.69	.08	T.		T.			.12			T.	.25		.10	.12	.56	3.60
Antioch	do								.16										.52				T.					T.	T.	.43	.51	1.62

TABLE 2.—*Daily precipitation for November, 1913. District No. 5*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Illinois—Continued.																																
Astoria	Illinois							T.	.08					T.	T.	.63		T.		.05			.45			T.	.25	T.	.25	.26	.78	2.75
Aurora	do								.08						.02	T.			.05			T.	.21				.10	T.	.05	.43	.80	1.74
Bement	Mississippi								.07	T.	T.			.05	.60	1.25	.08			.33						T.	.16		.21	.38	.84	3.97
Bloomington	Illinois							T.	.22					.06	.09	.42			T.				.07			T.	.32		.24	.18	1.09	2.69
Cairo	Mississippi							.33						.29	.03	.74	.24						.24					.26	.36	.02	.63	3.14
Camp Point	do							.06						.02	T.	.91		T.		T.			.35		T.	.07		T.	.30	T.	.57	2.28
Carbondale	do			T.				.32	T.		T.			.09	.55	.54	.39						.27	.02		.01	T.	.28	.25	.12	.60	3.44
Carlinville	Illinois							.07						T.	.85	1.76	.02						.07				.57		.01	.33	.34	4.02
Carlyle	Mississippi							T.	T.					1.50	1.15	.25							.65			.10	.35		.03	.73	.76	5.52
Chester‖	do								.22						.06	.72	.56						.02	.22			.06	.28		.95	.30	3.39
Clinton	Illinois			T.				.03	.14	T.	T.			.01	.41	.68	.06		T.	.09			.01			T.	.17		.57	.30	.68	3.15
Cobden	Mississippi							.68							.05	.40	1.00										.30	.12	.20	.30	.42	3.47
Dakota	do							T.	.39					T.		T.		T.	T.	.55							.06	T.	T.	.18	.48	1.66
Decatur‖	Illinois			T.					.15	T.	T.			.05	.72	1.58							.02				.25		.27	.33	.17	3.68
Dixon‖	Mississippi								.26						T.	T.			T.	.05			T.					T.		.35	.10	.76
Du Quoin	do							.42			T.				1.11	.53	T.						.12			T.	.02	T.	.26	.21	.57	3.24
Dwight	Illinois							T.	.12	T.				.15	T.	.04	.05		T.	.06	T.		.56				.07		.06	.23	.72	2.06
East St. Louis	Mississippi		T.												1.30	.13	.20	T.					.18			.05	.11	T.	.85	.39	.29	3.50
Edwardsville	do														1.94	.35	.20						.13				.50		.38	.26	.45	4.21
Elgin	Illinois								.35		T.				.02				.02				.03				T.		.10	.45	.52	1.49
Ewing	Mississippi			T.				.38	T.						.28		1.20	.28				T.	T.	.18		T.	.08	.20	.20	.19	.36	3.35
Fairview	Illinois								.13				T.	.09	.06	.08	T.		T.	.01	T.		.72				.11		.23	.28	.74	2.45
Galva	do								.30					T.		T.		T.	.05				.05			T.	.07	T.	.13	.35	.79	1.74
Grafton‖	Mississippi								.33						.28	1.50	.11								.20		.44		.12	.29	.25	3.52
Greenville	do							T.	T.					T.	1.43	1.05	.14				T.		.21			.01	.72	T.	.53	.43	.96	5.48
Griggsville	Illinois																															
Havana	do							T.	T.					T.		.68		T.		T.			.65			.06			.60	.25	.75	2.99
Henry	do								.20					.18		.04			.03	T.			.20			T.	.16		.23	.38	.67	2.09
Hillsboro	Mississippi			T.					.02						1.10	1.24	.04			T.			T.				.56	.13		.37	1.13	4.59
Joliet	Illinois							T.	.07	T.	T.		T.					.04	T.	T.			.12			.02	.02		.04	.27	.60	1.18
Kishwaukee	Mississippi								.38						.02				.03	.45	T.		.05			T.	.04	.02	.05	.38	.54	1.96
La Grange	Illinois										T.				.05				.03	T.			.16				.16	T.	.31	.41	.59	1.71
La Harpe	do												T.	.04	T.	.15			T.				.58			T.	.10	T.	.48	T.	1.08	2.43
Lanark	Mississippi							T.	.15					T.	.01			T.	.05	.52						T.	T.			.17	.42	1.32
La Salle‖	Illinois								.15					T.	T.				T.				T.	.68			T.	T.	.06	.40	.03	1.32
Lincoln	Illinois							.05	.20					T.	.25	.65	.08		T.	.12			T.				.30		.55	.16	1.08	3.44
Macomb	do												.09		T.	.45			T.	T.			.39				.17	T.	.32	.11	1.18	2.71
Manteno	do							.03	.17					.20		.04			.07	.04			.84				.11		.14	.16	.67	2.47
Martinton	do							T.	.10				.55	.05	.10			T.		.19			.30				.18		T.	.40	.53	2.40
Mascoutah	Mississippi							.03							1.45	.10	.20						.65			T.	.36		.16	.60	.35	3.90
Minonk	Illinois								.14					.23	.01	.14	.04			.09			.48				.12	.02	.04	.25	.56	2.12
Monmouth	Mississippi								.10										.05				.26			T.	.42	.02	.11	.06	1.04	2.06
Morris	Illinois							T.	.13					.04		.08			.14	T.	T.		.31				.10		.20	.30	.79	2.09
Morrison	Mississippi								.37						T.				T.	.42			T.			T.			T.	.21	.54	1.54
Morrisonville	Illinois			T.				.01	T.					T.	.47	1.94	.02	T.		T.	T.		.08				.45		.06	.31	.87	4.21
Mount Vernon‖	Mississippi								.23						.60	.83	.50						.25			.51	.16			.41	.35	3.84
Nashville	do			T.				.32						T.	1.32	.19	.18		T.	T.			.31	.06		.29		.11	.10	.60	.50	3.98
Oregon	do								.30										.50	.80			T.			T.		T.	.15	.12	.50	2.37
Ottawa	Illinois															.03				.09			.20				.12		.10	.40	.86	1.80
Pana	Mississippi			T.				T.	T.					T.	.32	1.93	T.			.02			T.			T.	.38		.25	.31	1.19	4.40
Paw Paw	Illinois								.26					T.	T.				.04	T.						T.	T.		.06	.50	.92	1.78
Peoria	do							.08	.16				.21	.06	T.	.09		.02		.10			.40			.06	.16	.01	.31	.30	.81	2.77
Pontiac	do							T.	.13					.10	.09	.10	T.			.10			.19				.16		.05	.14	.52	1.58
Quincy‖	Mississippi								.05						T.	.89	.03			T.	T.		.49	.14			.16		.13	.05		1.94
Riley	do								.31		T.				.04				.03	.37			.08				.03	.01	*	.45	.41	1.75
Roberts	Illinois							T.	T.	T.	T.			T.	.14	.22				.22	T.		.02				.24		.24	.31	.90	2.29
Rockford	Mississippi								.30					T.	T.				.02	.39			.03			T.	.05	.05	.03	.26	.39	1.52
Rushville	Illinois							.12						T.	T.	.73		T.		.06			.82			T.	.16		.16		1.30	3.35
St. Charles	do								.13	T.	T.				.04	T.			T.	.05			.15			T.	T.	T.	.06	.55	.65	1.63
St. Peter	Mississippi			T.			.06		T.						1.50	1.17	.21						.60	.10		T.	.44		T.	.48	.51	5.07
Sparta	do			T.				.04			T.			T.	.88	.28	.22	.02		T.			.18	.04		.02		.10	.07	.75	.26	2.86
Springfield	Illinois							.07	.05					.54	.66	1.08		T.		.01			.02			.07	.20	.02	.78	.24	.75	4.49
Streator‖	do								.17	T.				.21		.04	T.		T.		.02		.33	.47			.05	T.	.51	.44	.06	2.30
Sullivan	Mississippi							.03	T.		T.				.64	1.95				.24			.04				.30		.46	.29	.91	4.86
Sycamore	do								.05						.03				T.	.08	T.	T.	.03			T.	T.	.01	.13	.41	.49	1.23
Tiskilwa	Illinois								.45				T.	T.		T.		T.	T.	T.			.10			T.	T.	T.	.24	.33	1.28	2.40
Walnut	Mississippi								.31					T.		T.			.01	T.			.02				.01		.08	.41	.92	1.76
Warsaw‖	do								T.					.05									.92				.07		.08	.26	.40	1.78
Waterloo	do							.02							1.24	.08	.16						.37			.01	T.	T.	.01	.38	.30	2.55
White Hall	Illinois							.06						.04	1.40	1.80	.06			.04			.10			T.	.36		.02	.40	.46	4.74
Windsor	Mississippi			T.				T.	.05						.38	1.80				.20	T.		T.				.30		.35	.35	.85	4.28
Winnebago	do								.35					.03					.06	.60			.10						.02	.32	.42	1.90
Yorkville	Illinois								.04					.01		.01			.01				.21				T.	T.	.04	.50	.76	1.58

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.				Minnesota.																					
	Bottineau.§§		Devils Lake.		Lisbon.§§		Minot.§§		Pembina.§§		Collegeville.		Crookston.§§		Grand Meadow.		Montevideo.§§		Moorhead.		New Ulm.§§		Pine River Dam.		St. Paul.		Winnibigoshish.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	55	17	51	23	52	23	59	15	.....	.....	45	25	45	20	47	24	45	32	50	25	45	13	50	23	51	27	42	15
2....	45	22	46	27	54	23	45	21	.....	.....	53	26	52	26	55	34	63	32	55	30	48	21	58	32	58	39	55	20
3....	49	21	48	26	56	27	47	25	.....	.....	47	32	45	27	51	40	57	31	49	26	58	27	50	32	49	36	50	34
4....	58	18	55	27	48	26	60	28	.....	.....	54	24	51	22	54	24	62	25	55	22	58	24	53	19	51	30	50	20
5....	61	23	59	34	47	23	61	30	.....	.....	60	36	53	30	54	29	64	40	56	34	59	31	57	32	59	32	53	35
6....	44	24	51	31	50	21	31	34	.....	.....	58	49	49	36	62	42	64	42	53	38	60	35	59	51	60	49	60	38
7....	41	29	40	28	40	23	51	32	.....	.....	49	35	40	35	54	34	40	40	41	26	68	42	57	31	53	35	54	26
8....	43	19	40	26	38	15	37	19	.....	.....	37	25	35	23	39	27	41	29	38	25	53	28	40	24	38	28	48	20
9....	30	17	31	12	45	13	29	21	.....	.....	37	21	29	23	36	18	35	20	32	16	41	21	32	13	35	19	35	15
10....	35	13	30	12	46	14	51	18	.....	.....	29	10	27	10	30	10	45	14	29	11	38	15	33	8	32	14	32	0
11....	40	13	42	22	43	18	46	20	.....	.....	40	20	42	15	45	12	50	22	43	20	53	15	43	13	44	16	31	8
12....	35	25	41	23	43	13	42	30	.....	.....	40	30	45	25	54	28	40	30	43	28	48	22	41	19	47	31	35	18
13....	25	15	29	12	36	13	32	20	.....	.....	38	28	34	25	44	21	45	28	33	17	43	20	39	24	42	28	30	15
14....	40	5	36	10	40	6	46	6	.....	.....	39	18	32	9	38	19	38	12	34	7	44	18	34	30	35	21	31	11
15....	35	9	36	28	36	10	44	15	.....	.....	33	27	44	20	39	27	56	28	34	29	41	18	32	24	37	26	36	12
16....	55	24	56	28	52	12	66	25	.....	.....	42	31	53	32	47	29	56	29	52	33	45	29	46	30	48	34	40	18
17....	56	29	59	27	40	28	62	41	.....	.....	56	33	59	38	49	32	67	33	60	33	58	30	68	33	61	33	42	16
18....	32	23	30	23	46	26	57	28	.....	.....	50	34	36	28	59	46	45	29	37	29	49	34	55	38	47	38	44	18
19....	35	23	32	25	50	30	45	27	.....	.....	46	38	38	28	59	45	57	38	42	27	51	33	49	29	51	37	52	25
20....	53	24	45	28	50	25	50	25	.....	.....	48	30	50	27	62	45	55	35	51	28	55	34	47	30	60	35	52	22
21....	34	25	34	23	49	35	35	30	.....	.....	59	37	46	35	62	44	50	34	49	28	54	38	56	39	64	40	49	23
22....	33	12	33	21	49	26	40	20	.....	.....	43	29	34	30	56	37	52	28	32	18	57	35	45	30	45	31	46	22
23....	39	15	42	25	52	28	48	20	.....	.....	44	27	40	15	53	27	53	26	42	13	63	32	41	31	49	30	46	24
24....	48	13	44	23	47	30	55	17	.....	.....	48	27	43	17	50	27	56	27	46	22	62	35	48	33	52	30	47	22
25....	38	22	40	22	45	30	41	25	.....	.....	51	40	42	22	48	35	56	40	42	26	50	26	54	34	50	43	44	26
26....	37	23	36	24	43	29	45	20	.....	.....	45	33	40	26	46	42	48	35	40	31	53	31	45	32	44	37	38	21
27....	42	24	37	29	50	32	57	19	.....	.....	40	33	42	30	44	38	49	37	45	34	59	41	37	30	42	37	36	30
28....	32	17	36	25	47	26	35	16	.....	.....	49	40	40	35	45	40	48	38	49	35	56	42	43	35	46	42	38	26
29....	40	20	42	27	50	29	51	18	.....	.....	45	35	44	34	49	45	59	35	46	27	49	35	45	30	47	37	42	34
30....	39	20	40	21	51	27	43	18	.....	.....	36	26	35	22	51	40	40	23	41	20	53	31	40	21	37	30	42	38
Mns..	41.6	19.3	41.4	23.7	46.5	22.7	47.7	22.6	.....	.....	45.4	30.0	42.2	25.5	49.4	32.0	51.2	30.4	44.0	25.3	52.4	28.5	46.6	28.3	47.8	32.2	43.3	21.7

Date.	Wisconsin.														Iowa.											
	Eau Claire.		Grantsburg.		Hancock.		La Crosse.		Madison.		Prentice.		Wausau.		Algona.		Cedar Rapids.§§		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	51	22	49	24	49	24	49	25	44	25	48	19	48	18	48	24	46	21	47	23	47	26	52	27	47	26	50	28
2....	57	28	55	36	52	32	57	36	52	33	48	30	50	24	59	35	59	26	59	35	58	35	60	39	57	35	59	35
3....	50	41	49	35	49	43	52	41	52	40	47	37	46	32	51	39	57	37	50	33	55	39	52	36	52	42	58	40
4....	49	25	50	20	48	25	50	30	45	32	47	21	45	27	52	27	48	31	50	26	50	32	55	31	49	31	54	32
5....	58	22	59	32	53	27	56	28	52	30	50	27	54	24	60	30	55	28	57	26	57	31	62	31	56	29	60	30
6....	60	46	59	47	51	37	57	43	56	36	50	40	51	27	62	45	59	33	62	40	62	40	64	46	58	40	69	38
7....	58	44	56	37	55	45	55	36	58	42	50	45	50	39	56	37	55	47	55	35	59	39	57	40	57	38	61	44
8....	44	26	38	24	48	28	37	28	42	28	47	24	28	27	40	28	39	35	39	28	39	28	43	30	38	29	44	31
9....	38	20	34	18	33	28	38	24	35	24	30	18	30	21	38	21	40	26	39	22	40	24	40	26	38	25	43	26
10....	31	10	29	9	31	18	27	16	26	18	30	14	24	16	33	15	32	20	30	15	34	20	37	22	29	19	36	20
11....	42	13	41	11	40	13	41	16	38	18	36	6	41	14	45	16	43	18	44	16	43	20	49	20	41	19	47	20
12....	51	25	48	27	51	29	51	31	58	30	48	26	45	15	50	29	61	18	53	28	69	37	64	34	61	35	72	39
13....	44	27	40	28	46	28	47	28	49	34	48	25	43	24	46	29	45	31	47	25	54	34	48	32	46	32	60	38
14....	38	17	37	14	39	17	38	24	37	29	41	11	35	18	38	21	44	30	39	23	46	36	46	36	44	31	46	39
15....	35	22	37	15	36	25	40	29	38	31	38	13	35	18	40	30	43	30	41	30	42	35	44	36	44	31	41	36
16....	49	35	49	31	46	28	50	27	45	29	41	13	44	24	44	31	50	31	50	30	48	32	54	37	48	35	49	40
17....	55	27	58	32	49	35	50	37	46	36	51	31	48	28	52	33	55	35	51	33	55	40	56	40	53	40	55	40
18....	49	42	49	30	55	39	56	46	58	46	51	37	48	32	59	43	64	41	58	48	65	50	66	56	64	48	72	51
19....	54	43	52	38	57	43	64	33	63	47	49	37	50	32	58	45	67	54	63	44	67	58	66	54	66	52	72	61
20....	50	33	49	25	55	35	62	37	63	44	47	29	60	32	67	46	71	54	66	41	73	57	73	48	70	50	74	62
21....	63	48	65	43	64	45	65	45	67	52	60	41	62	32	63	50	67	55	63	42	71	53	66	50	69	49	73	60
22....	59	39	44	35	59	43	47	36	64	40	60	35	41	38	58	36	56	44	50	33	69	42	54	36	62	39	72	46
23....	52	26	44	25	50	29	55	28	51	32	47	24	47	27	53	28	55	31	55	28	55	34	58	31	55	33	54	37
24....	49	23	49	25	48	30	53	32	50	34	47	25	45	28	51	25	52	32	52	26	56	32	57	30	54	34	57	35
25....	51	34	54	37	53	33	52	38	48	35	46	30	51	24	47	39	53	42	48	37	53	41	49	44	50	40	57	43
26....	48	34	40	32	48	35	46	39	45	38	40	31	36	35	47	42	50	46	47	42	48	45	51	46	49	44	52	46
27....	41	34	40	33	38	33	44	37	42	39	35	30	38	30	49	44	49	45	46	41	51	45	53	48	48	42	60	48
28....	46	39	48	39	43	38	48	43	46	40	39	33	42	32	48	45	53	45	47	44	51	46	54	48	48	44	64	51
29....	46	41	47	42	45	37	50	45	48	43	41	38	44	37	51	46	57	47	54	46	58	50	59	52	53	47	62	56
30....	46	36	47	30	46	42	48	43	49	41	41	33	40	36	49	39	55	52	48	44	57	51	54	49	52	46	61	55
Mns..	48.8	30.7	47.2	29.1	47.9	32.1	49.5	33.7	48.9	34.9	45.1	27.4	44.0	27.0	50.5	33.9	52.7	36.2	50.3	32.8	54.4	38.4	54.8	38.5	51.9	36.5	57.8	40.9

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mount Vernon.§§		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	48	22	45	22	48	30	50	23	42	22	48	22	45	22	46	23	44	27	44	22
2	60	36	51	22	57	33	60	30	57	25	59	30	56	22	59	31	58	33	56	30
3	59	45	54	34	66	44	61	41	58	37	64	47	60	40	59	38	61	45	52	42
4	56	32	46	37	62	44	59	35	49	31	54	30	64	33	50	31	53	36	49	26
5	58	29	.....	30	59	38	60	30	57	25	57	25	56	36	56	27	56	33	52	25
6	68	38	63	.....	70	38	68	33	59	30	64	32	66	31	64	33	64	46	61	32
7	60	43	61	30	66	55	69	48	65	35	60	33	67	31	63	38	65	45	60	44
8	45	33	40	39	55	38	58	36	37	34	50	33	47	40	38	31	45	33	46	26
9	44	28	39	30	42	31	38	26	31	29	40	23	36	28	37	25	38	27	34	22
10	37	26	30	22	42	31	35	25	30	22	37	18	35	27	32	17	34	24	31	18
11	48	21	34	20	50	27	48	20	41	18	45	15	46	20	42	16	43	23	41	15
12	74	45	56	19	72	42	70	34	68	20	73	33	70	22	70	37	69	37	63	27
13	65	47	54	30	66	55	72	55	59	38	65	34	69	41	59	44	64	47	52	35
14	48	40	44	40	65	51	62	44	47	34	.....	37	51	47	47	38	47	39	40	30
15	41	39	40	34	63	51	54	42	44	33	48	37	60	46	42	37	43	39	40	33
16	49	40	.....	33	51	43	47	40	49	26	48	35	46	42	49	29	46	38	49	24
17	58	38	55	31	61	40	.....	.....	59	29	52	40	59	36	58	37	58	36	56	34
18	74	56	58	44	70	52	70	34	65	38	65	49	66	36	67	50	69	49	59	45
19	75	61	65	55	74	57	73	58	66	52	67	60	76	53	67	61	72	61	66	58
20	75	64	66	55	76	59	75	60	73	60	74	61	67	58	71	61	72	60	68	54
21	76	61	69	55	74	59	75	58	74	60	73	57	75	58	74	61	75	59	71	52
22	69	48	66	55	77	63	71	61	69	57	70	50	76	45	69	47	70	50	67	44
23	54	38	67	40	66	44	64	42	53	37	53	35	58	35	52	36	50	41	52	29
24	56	33	47	33	58	38	60	33	54	31	55	32	51	35	57	32	53	37	53	29
25	54	47	45	25	57	42	50	38	50	32	51	37	58	42	52	40	59	42	50	32
26	55	46	46	39	66	50	56	43	46	40	50	42	57	46	48	42	52	44	48	41
27	58	50	45	40	63	54	63	50	51	43	55	45	65	48	56	47	60	49	47	42
28	68	54	52	40	62	58	61	55	55	45	57	.....	64	52	58	50	62	53	48	42
29	64	57	56	40	65	59	61	56	58	45	58	50	63	57	59	56	61	56	54	45
30	66	57	60	45	66	52	66	53	59	54	59	55	66	57	62	53	65	51	55	48
Means	58.7	42.5	51.9[b]	35.8[a]	62.3	45.6	60.6[a]	41.5[a]	54.2	36.1	56.9[a]	37.8[a]	59.2	39.5	55.4	38.9	56.8	41.7	52.1	34.9

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 6, MISSOURI VALLEY.

MONTROSE W. HAYES, District Editor.

GENERAL SUMMARY.

The weather was unusually pleasant; the mildness that was general at the end of October prevailed through almost all of November. There were no severe storms, nor were there any of even moderate intensity. Conditions were favorable for all outdoor work; plowing continued all month, something unusual for the season of the year. The crops that were still in the fields at the end of October were gathered under most favorable circumstances. Range stock fared well, except for a shortage of water in some localities. The most unusual feature of the month was the effect of the mild weather upon vegetation; over much of the lower portion of the district grass began to grow, and at the end of the month pastures and lawns were springlike in their greenness; dandelions and some small-fruit trees were in bloom, and buds of some other varieties of trees were swelling. Another feature, which, however, was confined to the extreme lower part of the drainage area, was the large number of damp, foggy days in the latter half of the month. The sun was not seen for several days and the atmosphere was almost at the saturation point, but there was very little precipitation. There was less sunshine than usual in Missouri, Kansas, Iowa, and Nebraska; in the remainder of the district there was more than in the average November. The snowfall was light and melted as it fell, or soon afterward, except in the more elevated regions. At the end of the month there was no snow on the ground except in the mountainous country, and rarely have the roads been in a better condition at a like time of the year.

The following items, copied from South Dakota newspapers, are of interest in connection with the mildness of the month:

[From the Sioux Falls (S. Dak.) Argus-Leader.]

December 1, 1913, came to South Dakota with the grass on the lawns green, with no frost in the ground, with the buds very foolishly starting on some of the trees, and with a warm rain falling. Let a permanent record be made of this.

[From the Huron (S. Dak.) Morning Herald.]

YANKTON, S. DAK., *Dec. 1.*—The Government snag boat *McPherson* has just passed up the river from Sioux City to Running Water. * * * This is the latest date in the history of Missouri River navigation at which a steamboat has gone upstream.

TEMPERATURE.

The mean temperature for the month was above the normal in the entire district. The State having the greatest average excess was North Dakota, with 8.1°; the one having the least was Wyoming, with 3.8°. As a rule the first 10 days formed the coldest period, and in the lower portion of the district the 10th or the 11th was the coldest day; however, in the upper portion both the 14th and the 24th were cold, and at some stations either one or the other of these days was the coldest of the month. At St. Louis 6 days had mean temperatures below the normal, all occurring during the first 11 days. After the 11th the temperature did not go as low as the normal, nor was the freezing point reached. The highest reported thermometer reading was 82° at Grant, Nebr., and the lowest was 16° below zero at Grand Canyon, in the Yellowstone Park. There were zero temperatures in Wyoming, Montana, and North Dakota only, and in the district as a whole the minimum readings were among the highest ever recorded in November. The mean temperature of November, 1913, considering the district as divided into northern and southern halves, has been exceeded in but one November since records have been kept. In the northern region November, 1899, was warmer, and in the southern November, 1909, was slightly warmer, except in Kansas, where the month just ended established a new record for a high mean temperature. In Missouri and Nebraska there was very little difference between 1909 and 1913, but November of the former year had means that were a few tenths of a degree higher. During the latter part of the month a succession of cloudy days in the lower portion of the drainage area caused the daily range in temperature to be very small, amounting in some cases to no more than 3°. The month closed with the temperature above the normal in all parts of the district.

PRECIPITATION.

Geographically the precipitation was unevenly distributed. In the mountain and foothill country some areas had excesses, while adjacent ones had deficiencies. There was a very general deficiency in the eastern counties of Montana, Wyoming, and Colorado, in North Dakota, all of South Dakota except the southeastern portion, western Nebraska, and extreme western Kansas. In the remainder, or lower third, of the district, where most of the precipitation occurred on the 14th, 15th, 28th, 29th, and 30th, the average amounts for November were exceeded, with several local exceptions. The greatest total for the month was 4.82 inches at Lamonte, Mo.; some stations in the Dakotas and Nebraska had mere traces, and some in Wyoming and Colorado had none.

The snowfall in the mountains was not evenly distributed, and in most regions was below the normal for November. At lower elevations the precipitation was almost all in the form of rain, and the snowfall was decidedly less than is usual in November.

RIVERS.

Streams in all parts of the district were open. Some of the smaller ones in the plateau country were quite low, on account of the deficient precipitation, but the Missouri River stages were about normal and fluctuated very little.

TABLE 1.—*Climatological data for November, 1913. District No. 6, Missouri Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																			
Arapahoe	Freemont	5,200	3	.....	.....	.....	.....	.....	.....	.....	0.45	.....	0.30	3.0	2	.....	.....	.....	se.	Edw. L. Seymour.
Basin	Bighorn	3,862	14	41.8	+ 8.1	74	11	8	25	53	0.17	+ 0.03	0.17	0	1	24	4	2	nw.	O. J. Robertson.
Big Creek Station	Carbon	7,500	2	.....	.....	.....	.....	.....	.....	.....	0.88	.....	0.50	5.0	2	.....	.....	.....	.....	U. S. Forest Service.
Boyd	Weston	6,192	....	31.6	.....	61	10	6	29	50	0.51	.....	0.25	2.9	4	22	1	7	sw.	Kirk Baker.
Burns	Laramie	5,400	3	39.0	.....	72	9	10	21†	44	0.39	.....	0.10	2.5	6	12	18	0	sw.	E. W. Bastian.
Casper	Natrona	5,101	4	41.6	.....	66	11	16	24	39	0.48	.....	0.23	0.8	3	21	5	4	sw.	Jos. A. Murray.
Centennial	Albany	8,074	10	35.0	+ 2.8	56	10	11	4†	33	0.78	+ 0.14	0.45	7.3	7	12	13	5	w.	Louis A. Gregory.
Cheyenne	Laramie	6,088	42	39.1	+ 4.2	66	10	15	30	37	0.37	− 0.04	0.13	2.5	6	11	8	11	w.	U. S. Weather Bureau.
Chugwater	Platte	5,282	12	40.8	+ 4.1	69[d]	10†	11[d]	24	51[d]	0.00	− 0.49	0.00	0	0	14[d]	11[d]	1[d]	w.	A. H. Woolever.
Clark	Park	4,320	8	41.4	.....	65	10	18	29	32	0.19	.....	0.10	0	2	9	12	9	w.	Chas. A. C. Snow.
Cody	....do	5,000	6	38.1	.....	62	10	14	3	37	0.06	.....	0.04	0	2	18	9	3	w.	D. A. Tinkcom.
Crandall Creek	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ira H. Sparhawk.
Dome Lake	Sheridan	8,821	5	28.6	.....	53	10†	5	22	35	2.50	.....	0.60	25.0	8	15	5	10	sw.	Abe Mills.
Douglas	Converse	4,793	4	39.6	.....	66	10†	8	29	48	0.23	.....	0.11	1.0	3	13	10	7	w.	Henry C. Miller.
Dubois	Fremont	6,909	6	32.6	.....	63	9	5	24	39	0.50	.....	0.30	3.0	3	12	13	5	nw.	Dr. F. H. Welty.
Eatons Ranch	Sheridan	4,600	8	42.0	.....	69	16	11	22	35	0.38	.....	0.18	2.0	3	25	3	2	n.	F. A. Eaton.
Echeta	Campbell	4,200	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. R. Hunter.
Elk Mountain	Carbon	.....	8	.....	.....	.....	.....	.....	.....	.....	1.22	.....	0.47	22.5	8	.....	.....	.....	.....	Wm. Richardson.
Encampment	....do	7,322	4	35.0	.....	59[g]	10	3[g]	29	42	0.87	.....	0.23	7.5	9	4[g]	15[g]	14[g]	sw.	U. S. Forest Service.
Ervay	Natrona	6,400	4	34.0	.....	56	10	9	4	30	0.25	.....	0.15	4.0	3	22	4	4	sw.	Frank Jameson.
Fort Laramie	Goshen	4,270	35	40.3	+ 5.3	68[f]	1	9	24	56[f]	0.40	+ 0.05	0.40	4.0	1	19	11	0	w.	John Hunton.
Foxpark	Albany	9,015	3	29.8	.....	45[l]	17	3[l]	4	35[l]	1.20	.....	0.50	13.0	4	6[l]	6[l]	6[l]	sw.	U. S. Forest Service.
Germania	Bighorn	4,312	2	34.6	.....	62	11	9	29	40	0.24	.....	0.18	T.	2	22	5	3	nw.	J. W. Peper.
Gillette	Campbell	4,546	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. H. Shields.
Horse Creek	Fremont	8,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Hunters Station	Johnson	8,000	7	33.2	.....	61	9	3	29	43	0.28	.....	0.12	5.0	3	20	3	7	w.	Do.
Hyattville	Bighorn	4,632	14	40.4	+ 3.9	66	1	10	29	39	0.20	.....	0.20	3.0	1	15[a]	7[a]	7[a]	.....	Wm. Booth.
Jireh	Niobrara	5,100	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. L. Ford.
Kinnear	Fremont	.....	....	33.5	.....	61	1	6	22†	50	T.	.....	T.	T.	0	15	8	7	e.	John C. Hays.
Kirtley	Niobrara	.....	9	39.4	.....	66	10	15	4†	42	0.03	.....	0.03	0.5	1	18	7	5	sw.	D. M. ZumBrunnen.
Kirwin	Park	9,187	4	25.2	.....	51[f]	9	−1[f]	17	32[f]	2.12	.....	0.92	24.0	9	12[g]	7[g]	4[g]	w.	C. L. Tewksbury.
Knowles	Crook	4,500	4	.....	.....	.....	.....	.....	.....	.....	0.12	.....	0.10	1.6	2	22	4	4	sw.	Geo. A. Knowles.
Lagrange	Goshen	4,720	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Owen Shupp.
Lander	Fremont	5,372	21	33.9	+ 5.2	62	1	10	29	39	0.51	− 0.09	0.30	3.6	4	11	10	9	sw.	U. S. Weather Bureau.
Laramie	Albany	7,188	22	35.8	+ 3.8	61	10	10	24	43	0.76	+ 0.47	0.50	2.5	4	18	8	4	ne.	University of Wyoming.
Leo	Carbon	6,878	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. A. Cowdin.
Lolabama Ranch	Park	7,052	9	36.1	.....	69	17	− 5	2	51	0.15	.....	0.15	4.0	1	13	11	6	w.	Mary E. Painter.
Lovell	Bighorn	3,825	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. Fred Harrison.
Lusk	Niobrara	5,007	22	40.0	+ 6.9	67	18	13	29	45	T.	− 0.25	T.	T.	0	.....	.....	.....	.....	D. E. Goddard.
Manville	....do	5,050	3	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.30	3.0	3	11[a]	16[a]	2[a]	sw.	L. C. Stoddard.
Moorcroft	Crook	4,311	9	40.7	.....	65	10†	19	22	38	0.05	.....	0.05	0.5	1	22	5	3	s.	C. T. McCampbell.
Moore	Albany	6,000	12	39.8	+ 2.1	66	10	14	4	35	0.80	+ 0.28	0.59	6.0	4	12	8	10	w.	Edwin Moore.
Newcastle	Weston	4,319	6	38.4	.....	65	11	18	22†	34	0.50	.....	0.35	1.5	2	20	5	5	w.	Dr. S. W. Johnson.
Pathfinder	Natrona	5,735	7	37.6	.....	57	9	18	22	27	0.45	.....	0.24	3.5	3	16	12	2	sw.	U. S. Reclamation Service.
Pinebluff	Laramie	5,038	10	43.2	+ 5.4	76[j]	9†	15[j]	23†	50[j]	0.20	− 0.14	0.17	0.8	2	.....	.....	.....	.....	C. L. Beatty.
Pine Ridge	Crook	.....	1	.....	.....	.....	.....	.....	.....	.....	0.02	.....	0.02	0.2	1	3[g]	13[g]	7[g]	.....	J. E. S. Altaffer.
Powell	Park	4,376	5	35.6	.....	60	11	13	21†	37	0.00	.....	.....	0	0	17	9	4	nw.	U. S. Reclamation Service.
Rawlins	Carbon	6,748	11	34.4	+ 1.2	55	10	9	22	37	1.03	+ 0.40	0.32	7.0	9	13	10	7	w.	E. J. Ehrenfeld.
Rock River	Albany	6,900	....	36.0	.....	61	10	10	4†	42	0.50	.....	0.50	3.5	1	27	0	3	w.	Rock Creek Conservation Co.
Rockypoint	Crook	.....	1	.....	.....	.....	.....	.....	.....	.....	0.08	.....	0.08	1.0	1	19	5	6	s.	P. Woxen.
Saratoga	Carbon	6,785	15	35.2	+ 3.1	60[m]	10†	0[m]	29	45[m]	0.75	+ 0.17	0.30	6.0	3	11[m]	1[m]	5[m]	sw.	R. G. Hamilton.
Seven-mile Creek	....do	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Sheridan	Sheridan	3,790	18	36.8	+ 4.4	65	16	13	29	41	0.22	− 0.37	0.10	0.4	3	11	10	9	se.	U. S. Weather Bureau.
Shoshone Dam	Park	5,385	7	42.6	.....	69	9	23	3	29	0.08	.....	0.04	1.0	3	19	6	5	w.	U. S. Reclamation Service.
South Pass City	Fremont	7,796	11	25.0	− 0.9	49	9†	− 7	23	36	0.73	− 0.26	0.23	11.5	6	13	5	12	sw.	John Sherlock.
Sundance	Crook	4,750	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. W. Ashdown.
Thermopolis	Hot Springs	4,350	10	37.5	+ 3.6	67	11	3	29	41	0.62	+ 0.35	0.24	5.7	4	21	7	2	sw.	A. L. Duhig.
Ulm	Sheridan	4,448	1	37.0	.....	61	10	12	21	37	0.05	.....	0.05	0.5	1	16	13	1	se.	W. H. Coleman.
Upton	Weston	.....	1	35.9	.....	65	11	14	24	47	0.30	.....	0.17	T.	2	14	10	6	se.	Ray C. Thompson.
Verona	Sheridan	4,360	4	.....	.....	.....	.....	.....	.....	.....	0.17	.....	0.06	2.0	3	7	18	5	se.	O. A. Roode.
Wheatland	Platte	4,700	2	43.4	.....	77	17	5	30	61	0.54	.....	0.44	3.0	2	11	13	6	w.	C. A. Rockwell.
Wiants Ranch	Carbon	7,400	3	.....	.....	.....	.....	.....	.....	.....	0.78	.....	0.22	11.2	7	6	15	9	sw.	Ira G. Wiant.
Woodrock	Sheridan	8,500	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Worland	Washakie	4,033	2	34.8	.....	64	11	8	22†	48	0.24	.....	0.07	1.0	5	17	9	4	se.	Prof. B. C. Buffum.
Wyncote	Goshen	4,186	6	40.7	.....	70	10†	9	24	55	0.35	.....	0.23	2.5	3	14	16	0	nw.	U. S. Reclamation Service.
Yellowstone Park	Yellowstone Park	6,200	25	31.6	+ 2.3	54	9	9	22	28	1.54	+ 0.10	0.53	3.5	13	6	7	17	s.	U. S. Weather Bureau.
Fountain	....do	7,220	7	26.9	.....	60	1	−13	24	47	1.40	.....	0.30	18.6	8	9	5	16	s.	U. S. Army.
Gallatin	....do	7,400	2	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.30	18.0	8	12	1	17	s.	Do.
Grand Canyon	....do	7,900	6	22.7	.....	43	1†	−16	24	44	2.25	.....	0.50	22.5	12	9	8	13	w.	Do.
Lake Yellowstone	....do	7,733	9	24.4	.....	49	6	− 1	24	38	1.98	.....	0.29	23.5	15	6	0	24	se.	Do.
Norris	....do	7,500	9	25.6	.....	53	9	−15	24	51	2.48	.....	0.70	23.0	7	9	3	18	sw.	Do.
Riverside	....do	6,500	7	25.7	.....	52	10	−12	23	44	2.90	.....	0.70	29.0	9	3	0	27	sw.	Do.
Soda Butte	....do	7,000	8	30.2	.....	52	1†	− 1	7	41	0.94	.....	0.40	4.9	3	9	6	15	sw.	Do.
Sylvan Pass	....do	7,000	6	29.0	.....	55	9	0	24	43	2.33	.....	0.70	12.3	13	13	1	6	w.	Do.
Thumb	....do	7,772	7	24.2	.....	45	8†	− 4	21†	38	3.42	.....	0.60	45.5	9	12	0	18	w.	Do.
Tower Falls	....do	6,250	4	29.0	.....	54	1	− 1	24	36	1.15	.....	0.50	5.0	5	8	9	13	s.	Do.
Upper Geyser Basin	....do	7,395	9	25.9	.....	56	12	3	20	37	2.00	.....	0.30	20.0	13	12	0	18	nw.	Do.
Montana.‡																				
Absarokee	Stillwater	4,000	3	39.9	.....	70	1†	11	13†	51	0.73	.....	0.73	0	1	23	5	2	sw.	E. F. Bryant.
Adel	Cascade	5,200	14	37.0	+ 4.5	64	9	4	21	42	0.64	− 0.25	0.20	5.0	5	16	6	8	w.	Mrs. Bessie F. Burch.
Agricultural College	Gallatin	4,900	15	34.7	+ 3.2	60	1	9	21	28	1.24	+ 0.28	0.69	14.0	7	14	5	11	se.	Edmund Burke.
Augusta	Lewis and Clark	4,071	14	36.9	+ 5.5	68	9	− 4	22	46	0.24	− 0.37	0.24	3.0	1	23	5	2	w.	C. C. Covington.
Bald Butte	....do	6,500	3	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.68	11.6	10	10	13	7	.....	Mary L. Alderson.
Bigtimber	Sweet Grass	4,094	7	38.0	.....	67	9	12	16†	48	0.35	.....	0.27	1.0	2	17	7	6	w.	F. A. Severance.
Billings	Yellowstone	3,115	17	39.6	+ 5.0	65	1	15	29	42	0.26	− 0.63	0.20	T.	2	17	8	5	sw.	Dean J. Cole.
Blackleaf	Teton	4,260	5	36.8	.....	64	9	1	21	40	0.16	.....	0.08	3.5	3	11	9	10	w.	Roy McNeal.
Boulder Nursery	Jefferson	5,200	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Bowen	Beaverhead	6,080	6	24.6	.....	54	1	− 10	24	48	1.23	.....	0.52	3.3	8	11	8	11	.....	B. B. Lawrence.
Box Elder	Hill	2,677	....	34.5	.....	57	10	9	15	39	0.61	.....	0.31	4.3	7	13	11	6	s.	C. L. Herzog.
Brenner	Beaverhead	.....	.....	28.2	.....	52	1	8	3†	29	0.88	.....	0.39	8.2	7	7	12	11	sw.	A. A. Schroeder.
Bridger	Carbon	3,664	4	37.8[e]	.....	59[e]	5	10[e]	21	38[e]	0.15	.....	0.15	T.	1	8[e]	5[e]	14[e]	s.	L. E. Gard.
Broadview	Yellowstone	3,800	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Thos. S. Hunt.
Browning	Teton	4,440	4	.....	.....	.....	.....	.....	.....	.....	0.36	.....	0.12	4.5	6	18	12	0	w.	U. S. Reclamation Service.

TABLE 1.—*Climatological data for November, 1913. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana—Continued.																				
Busby	Bighorn		9	37.4		68	16	9	29	45	0.04		0.03	1.0	2	13	16	1	se.	Rev. G. A. Linscheid.
Busteed	Stillwater	4,050	5	39.1		64	1	11	21	37	0.32		0.28	T.	4	19	8	3	w.	T. H. Busteed.
Cameron	Madison			33.3		60	9	10	22†	35	0.81		0.30	10.3	6	15	3	12		H. C. Bosworth.
Canyon Ferry	Lewis and Clark	3,670	14																	W. L. Kirk.
Cascade	Cascade	3,361	8	42.6		67	10	10	21	31	1.38		0.79	2.5	3	8	19	3	sw.	Dr. E. E. James.
Chester	Hill	3,132	9	35.8		71	2	− 1	21	56	0.43		0.16	4.0	4	19	5	6	w.	C. F. Baker.
Chinook	Blaine	2,502	14	36.6	+ 9.1	59	5	11	13	40	0.85		0.48	0	7	12	11	7	w.	T. O'Hanlon Co.
Clydepark	Park	5,027	1	36.6		61	1	8	21	41	0.47		0.26	2.5	5	12	9	9	nw.	J. H. Eyman.
Conrad	Teton	3,501	2	38.1		67	9	0	21	42	0.26		0.22	0.5	2	9	9	12	sw.	Robert J. Kelly.
Copper	Meagher	5,680	8								1.13		0.50	3.0	6	14	10	6	w.	Orville Harris.
Crow Agency	Bighorn	3,041	30	39.2[d]	+ 6.5	64[d]	16	16•	22	40•	0.64	− 0.14	0.37	0	3	16	13	1	s.	Harry Throssell.
Culbertson	Sheridan	1,927	10	35.7	+ 9.9	67	2	14	29	40	0.18	− 0.16	0.15	0.3	2	17	3	10	w.	G. H. Coulter.
Cut Bank	Teton	3,745	14	37.3	+ 6.7	64	10	12	3	43	0.10	− 1.01	0.10	1.0	1	21	7	2	w.	Chas. N. Thomas.
Denton	Fergus	3,500	4	38.8		63	9	11	21	34	0.69		0.33	2.5	4	12	6	12	w.	P. J. Griesenauer.
Dillon	Beaverhead	5,143	15	36.6	+ 2.7	68	1	8	22	44	0.68	− 0.32	0.42	1.7	4	15	7	8	sw.	Prof. J. E. Monroe.
Dunkirk	Hill	3,450	1								0.26		0.23	T.	2	26	1	3	w.	B. C. Protzman.
Ekalaka	Custer		12	39.1	+ 9.3	62	5†	10	3	37	0.19	− 0.03	0.16	T.	2	20	6	4	w.	William Freese.
Fallon	....do	2,208	8	35.8		65	17	13	25†	40	0.25		0.25	0	1	14	15	1	w.	Mrs. A. C. Gifford.
Findon	Meagher	6,000	1	35.8		61	9	13	21	33	0.53		0.33	3.6	6	16	8	6	w.	Lewis Cameron, sr.
Flathead Creek	Gallatin	6,000	2																	Alta Williams.
Flatwillow	Fergus			39.0		65	1†	8	21	41	0.56		0.26	2.0	5	19	0	11	w.	W. Johnson.
Forsyth	Rosebud	2,514	6	39.2		69	17	11	25	48	1.09		1.09	0	1	16	11	3	e.	H. Mackenzie.
Fort Shaw	Cascade	3,500	24	40.0	+ 6.3	63	9†−	2	21	37	0.46	+ 0.06	0.29	3.8	3	6	9	15	sw.	U. S. Reclamation Service.
Foster	Bighorn	2,800	3	37.4		66	1	14	24†	50	0.30		0.17	0	3	17	9	4	s.	E. K. Bowman.
Garneill	Fergus	5,500	4	35.0		59	9	6	23	33	0.40			6.0	5	3	17	10	sw.	Thos. E. Scally.
Geyser	Cascade	4,147																		I. G. Finfrock.
Glacier Park	Teton			36.3		62	9	18	21	31	0.54		0.14	5.5	8	19	6	5	w.	J. M. Cathcart.
Glasgow ‖	Valley	2,092	16																	C. D. Bauer.
Glendive	Dawson	2,069	22	36.4	+ 7.5	62	6	14	14	34	0.10	− 0.45	0.10	T.	1	19	10	1	s.	E. C. Leonard.
Goldbutte	Hill	3,500	5	34.4		60	8	5	22	33	0.16		0.14	0	2	8	14	8	w.	Joseph Berthelote.
Graham	Custer		7								0.08		0.08	T.	1					J. S. Rue.
Great Falls	Cascade	3,350	21	41.7	+ 6.6	68	1†	16	21	46	0.60	− 0.20	0.21	3.0	5	13	16	1	sw.	S. H. Bauman.
Harlowton	Meagher	4,160	5	35.0		61	1†	7	21†	51	0.31		0.16	2.0	2	13	6	11	w.	Joseph Muir.
Havre	Hill	2,505	33	34.8	+ 4.2	59	16	8	13	40	0.83	+ 0.06	0.23	3.2	9	5	7	18	sw.	U. S. Weather Bureau.
Hebgen Dam	Gallatin	6,700	7	24.1		45	9†	0	24	39	1.23		0.35	5.9	8	12	0	18	s.	T. L. Carson.
Helena	Lewis and Clark	4,110	33	38.0	+ 5.3	59	16	20	21	28	0.52	− 0.20	0.38	T.	4	7	10	13	sw.	U. S. Weather Bureau.
Highwood	Chouteau	4,300	6								0.84		0.34	4.6	4	12	5	13	sw.	W. S. McCord.
Huntley	Yellowstone	3,037	7	38.7		62	1†	12	22	37	0.40		0.35	0	2	24	4	2	w.	U. S. Reclamation Service.
Knobles Ranch	Hill		2								0.12		0.06	2.0	4	18	2	10	sw.	F. H. Knoble.
Lewistown	Fergus	4,006	15	35.5	+ 2.0	69	9	7	22	44	0.69	− 0.19	0.36	5.0	3	10	9	11	nw.	W. W. Watson.
Lima	Beaverhead	2,053		31.6		58	1	2	28	43	0.58		0.35	7.5	4	23	0	7	se.	H. J. Barber.
Lonetree	Chouteau	3,280	7																	E. Wilson.
Lothair	Hill	3,301	1	35.0		58	1	6	22	41	0.50		0.30	2.5	3	15	5	10	w.	James H. Whiteley.
Lytle	Chouteau		1	38.0		64	9	11	21	32	0.18		0.10	0.6	3	19	7	4	sw.	J. F. Falt.
Malta	Valley	2,250	6	29.9		54	4	9	14	38	0.30		0.11	3.0	6	2	21	7	ne.	U. S. Reclamation Service.
Medicine Lake	Sheridan	1,969	2	31.6		59	16	10	22	32	0.43		0.20	3.0	4	23	7	0	sw.	J. S. Collier.
Melstone	Musselshell	2,903	1	41.5		68	16	12	21	35	0.30		0.30	0	1	19	8	3	sw.	C. W. Greening.
Mildred	Custer	2,364	4								0.12		0.12	T.	1	19	9	2	nw.	Leon B. Clark.
Miles City	....do	2,371	21	40.2	+ 9.3	64	16	20	27	34	0.04	− 0.56	0.02	0	2	12	16	2	se.	U. S. Weather Bureau.
Norris	Madison	4,845	6	39.4		62	9†	17	3	41	0.34		0.26	3.3	4	15	9	6	s.	Montana Power Co.
Pinegrove	Musselshell		1	35.8		60	27	12	22	35	0.83		0.40	7.0	4	6	17	7	w.	G. W. White.
Plevna	Custer	2,757	1	35.8		62	5	17	12†	38	0.29		0.19	1.1	4	18	8	4	sw.	C. C. Conser.
Poplar	Sheridan	2,020	27	37.9	+10.0	66	26	15	14†	45	0.22	− 0.51	0.22	T.	1	24	3	3	nw.	H. M. Cosler.
Red Lodge	Carbon	5,548	13	32.2	+ 1.1	54	11	5	20	36	0.60	+ 0.02	0.60	4.5	1	12	12	6	se.	I. A. Draper.
Renova	Jefferson	4,360	14	37.8	+ 4.0	64	1	15	14†	35	0.84	+ 0.42	0.51	3.0	4	13	0	17	sw.	F. B. Elmer.
Ryegate	Musselshell	3,640	3	37.0		67	1	9	21†	45	0.55		0.40	1.5	3	22	0	8	w.	H. W. Scherfenberg.
Savage	Dawson	1,985	7	36.2		60	6	12	14	34	0.15		0.15	1.0	1	13	16	1	w.	U. S. Reclamation Service.
Shelby	Teton	3,176	1	35.7		63	8	5	13	40	0.35		0.20	2.0	2	12	10	8	sw.	Olaf C. Fjeld.
Sidney	Dawson		2																	P. F. Blake.
Springbrook	....do		11	37.7	+ 8.9	61	1	15	13†	38	0.42	− 0.29	0.30	3.2	3	12	12	6	s.	Mrs. H. L. Miller.
Stacey	Custer			42.2		72	17	17	3†	41	0.10		0.10	0.1	1	25	3	2	w.	C. A. Newman.
Sunlit Farm	Blaine	3,170	1	33.3		59	10	8	15	36	0.12		0.06	1.2	3	15	5	10	w.	C. R. Noyes.
Sun River Canyon	Teton	4,650	1	35.9		61	4†	11	21	32	0.44		0.32	4.5	2	8•	4•	11•	w.	U. S. Reclamation Service.
Three Forks	Gallatin	4,066	2	36.0		61	1	0	22	33	1.26		0.47	4.1	4	10	11	9	sw.	C. E. Adams.
Utica	Fergus	5,000	18	38.1	+ 4.5	68	9	5	22	34	1.60	+ 0.74	0.77	6.5	3	24	3	3	w.	P. W. Korell.
Valentine	....do	2,800	6	36.2		61	1	0	22	38	0.74		0.39	3.0	3	19	3	8	w.	B. M. Bean.
Valier	Teton		1	37.6		66	10	11	21	40	0.27		0.15	2.0	2	16	8	6	w.	Ford, Bacon & Davis.
Wall Rock Mountain	Broadwater	5,600	4								0.65		0.17	7.5	8	14	13	3	nw.	D. L. Doig.
Wheaton	Musselshell		1	40.9		63	1†	7	21	37	0.34		0.19	0	3	12	8	10	sw.	P. O. Balgord.
White Sulphur Springs	Meagher	5,280	1	36.0		57	9	7	21	28	0.42		0.16	2.0	3	4	16	10		P. R. Wild.
Wilder	Fergus		2																	J. O. Rogers.
Wolf Creek	Lewis and Clark	3,460	9	40.6		63	18	21	2	36	1.02	+ 0.35	0.51	0	6	4	21	5	s.	A. J. Reed.
North Dakota.																				
Aplin	Oliver		6	35.1		62	6	9	14	36	0.05		0.05	0.5	1	19	9	2	s.	J. B. Hagelbarger.
Ashley	McIntosh	2,001	16	31.4	+ 5.4	65	18	0	14	42	0.20	− 0.33	0.20	2.0	1	12	0	18	e.	R. C. Miles.
Beach	Golden Valley	2,576	7	36.4		61	1	6	29	47	0.34		0.25	1.0	3	21	6	3	nw.	D. J. Steiner.
Belfield	Stark	2,583	2								T.		T.		0	25	5	0	w.	E. W. Russell.
Berthold Agency	McLean	2,082	19	35.3	+ 7.8	61•	5	6•	14	41•	0.09	− 0.45	0.08	0	2	15	13	2	nw.	C. L. Hall.
Bismark	Burleigh	1,674	40	35.2	+ 9.2	64	5	9	14	36	0.16	− 0.52	0.13	2.6	3	12	13	5	nw.	U. S. Weather Bureau.
Buford	Williams	1,944	34	36.2	+ 9.4	59	1	16	9†	35	0.28	− 0.20	0.12	0.5	5	8	13	9	sw.	C. H. McCune.
Carson	Morton		1	33.7		64	5	9	14	44	0.40		0.20	2.0	2	17	7	6	s.	D. L. Basquin.
Dickinson	Stark	2,543	21	35.4	+ 8.1	61	16†	14	14	41	0.43	− 0.10	0.30	0.8	3				s.	L. R. Waldron.
Edgeley	LaMoure	1,468	12	35.3	+ 5.8	64	6	8	14	34	0.28	− 0.10	0.15	6.0	2	8	9	13	s.	O. A. Thompson.
Epping	Williams	2,224	5								0.08		0.08	T.	1	18	9	3	se.	M. E. Uggen.
Fullerton	Dickey	1,439	15	34.9	+ 6.5	61	17	10	14	33	0.53	− 0.15	0.32	5.3	2	16	6	8	s.	F. O. Alln.
Garrison	McLean	1,901	18	34.3	+ 9.3	61	17	8	14	34	0.59	− 0.09	0.54	T.	2	14	10	6	nw.	G. L. Robinson.
Haley	Bowman	2,260	5																	A. O. Lawrence.
Hettinger	Adams	2,253	5																	W. R. Lanxon.
Howard (near)	Divide	2,275	4	31.4		61	1	4	22	43	0.22		0.20	1.7	3	14	4	12	se.	C. P. Amsbaugh.
Jamestown	Stutsman	1,390	21	34.0	+ 7.5	63	5	4	14	38	0.60	− 0.13	0.30	6.0	4	13	3	14	nw.	Thos. Pettigrew.
Krem	Mercer																			C. M. Janzen.
Lamoine	Kidder		5	32.2		61	17	1	14	33	0.20		0.20	2.0	1	15	9	6	nw.	E. V. Virgin.
McHenry (near)	Eddy	1,509	3	32.4		60	17	12	10	32	0.05		0.03	0.2	2	21	5	4	nw.	P. E. Truden.

TABLE 1.—*Climatological data for November, 1913. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota—Contd.																		
Marmarth (near)	Bowman		4	37.6		62b	5	14a	29	36b	0.16		0.07	1.6	3				w.	S. P. Grane.
Marstonmoor	Stutsman		4	33.1		62b	5†	− 2b	14	42	0.30		0.20	3.0	2				sw.	H. H. McCumber.
Medora	Billings	2,225	19																	Mrs. M. C. Hesser.
Melville	Foster	1,590	15	35.1e	+ 7.6	67e	5	6e	14	37e	0.20	− 0.22	0.20	2.0	1					J. P. Kidder.
Mott	Hettinger	2,424	6	36.2		72	20	12	23	47	0.23		0.21	2.0	2	16	8	6	w.	O. H. Opland.
Napoleon	Logan	1,955	21	33.0	+ 8.0	63	5†	2	14	38	0.55	− 0.15	0.50	5.5	2	16	3	11	sw.	C. J. Hoof.
New England	Hettinger	2,400	19	37.0	+ 8.6	78	1	10	29	55	0.20	− 0.35	0.20	2.0	1	18	3	9	nw.	J. M. Connolly.
New Rockford	Eddy	1,531	2																	J. V. M. Sundberg.
New Salem	Morton	2,163	8	34.2		63	5†	9	14	43	0.24		0.20	2.0	3	14	12	4	nw.	J. Christiansen.
Orange	Adams		4	39.4		65	1	11	9	51	0.20		0.20	4.0	1	18	9	3	nw.	J. E. Goforth.
Ranger	Billings																			R. E. Sheriff.
Ronda	Mercer			34.1		60	17	9	14	38	0.11		0.07	0.5	4	12	14	4	nw.	H. A. Crandall.
Steele	Kidder	1,857	16	35.8	+ 9.8	60	6	11	9	33	0.11	− 0.48	0.10	2.0	2	20	10	0	w.	H. S. Wood.
Turtle Lake	McLean		1	33.8		63	17	5	14	33	0.18		0.08	0.3	4	19	4	7	s.	E. G. Ranum.
Washburn	do	1,734	15	34.7	+ 7.7	60	5†	11	14	32	0.20	− 0.53	0.20	2.0	1	18	10	2	w.	W. R. Peterson.
Williston	Williams	1,875	34	35.4	+10.2	62	16	15	14	32	0.15	− 0.45	0.07	0.4	4	11	7	12	sw.	U. S. Weather Bureau.
South Dakota.																				
Aberdeen	Brown	1,300	23	37.6	+ 9.2	65	6	11	14	41	0.67	− 0.21	0.25		4	19	2	9	s.	D. G. Gallett.
Academy	Charles Mix		14	43.2	+ 7.0	73	2	13	10	43	0.42	− 0.01	0.30	1.0	4	20	4	6	s.	I. T. Lothrop.
Alexandria	Hanson	1,352	25																	C. H. Stillwell.
Ardmore	Fall River	3,557	2	39.6		67	12	16	23	44	0.15		0.10		2					F. L. Kelso.
Armour	Douglas	1,521	18																	T. J. Markey.
Bellefourche	Butte	3,000	5	39.8		70	11	15	24	50	0.24		0.24	0.5	1	12	14	4	nw.	U. S. Reclamations Service.
Blunt	Hughes	1,621									0.24		0.24	1.0	1	11	13	6	nw.	James A. Howard.
Britton	Marshall	1,354		36.2		59	20	10	14	34	0.13		0.08	1.5	2	15	11	4	s.	W. S. Given.
Brookings	Brookings	1,636	24	38.8	+ 9.7	62	6	11	10	40	0.81	+ 0.28	0.52		4	13	3	14	nw.	Experiment Station.
Bryant	Hamlin	1,846	1								0.27		0.15	0.8	3	7	19	4	nw.	E. D. Landon.
Camp Crook	Harding	3,000	20	37.4	+ 6.4	65e	17	6	25	52e	0.12	− 0.31	0.12	T.	1	23	6	1	sw.	U. S. Forest Service.
Canton	Lincoln	1,248	18	39.8	+ 6.0	63	5	12	10	41	0.96	+ 0.05	0.87	1.5	2	16	3	11	se.	John H. Holsey.
Castlewood	Hamlin	1,685	8	38.0		62	6	8	14	39	0.78		0.61	0.8	3	12	5	13	s.	M. N. Bradley.
Centerville	Turner	1,229	16	40.8		65	2†	16	10	39	1.10	+ 0.40	0.58	1.8	4	9	11	10	se.	Frank Williams.
Chamberlain	Brule	1,363	14	40.4d	+ 6.3	64e	2†	11d	10	36d									se.	W. B. Van Horn.
Clark	Clark	1,779	21	38.3	+ 8.3	62	3†	12	10†	41	0.50	− 0.26	0.20	4.0	4	14	15	1	nw.	O. H. La Craft.
Cottonwood	Stanley	2,414	5	39.3		70	11	11	30	55	0.14		0.08		2	15	9	6	se.	Experiment Station.
Custer	Custer	5,316	1								0.10		0.10	1.0	1	22	2	6	sw.	R. P. Imes.
Daviston	Perkins		3	37.8		65	5	15	22†	41	0.02		0.02	0.2	1	18	5	7	se.	Dyson Byers.
Deadwood	Lawrence	4,535	4	39.1		65	20	18	3†	35	0.20		0.20	0	1	18	4	8	nw.	R. E. Grimshaw.
Deerfield	Pennington	6,000	4								0.33		0.22	1.5	3	18	11	1	w.	Frank E. Miller.
De Smet	Kingsbury	1,726	20	38.6	+10.2	64	6†	11	9	39	0.36	− 0.58	0.36	T.	1	6	22	2		W. E. White.
Dowling	Stanley	2,250	4	40.0		67	1	16	10†	42	0.30		0.30	0	1	20	6	4	nw.	M. P. Dowling.
Dumont	Lawrence	6,195	4								0.15		0.09	T.	2	24	4	2	sw.	A. B. Wood.
Eales	Potter		2								0.23		0.09	1.7	4	14	10	6	nw.	A. H. Peterson.
Elk Mountain	Custer	4,700	4																	James E. Blaine.
Ellingson	Perkins		1	36.8		63	5†	12	28	40	0.14		0.12	0.5	2	21	5	4	nw.	Carl G. Moen.
Eureka	McPherson	1,884	4	34.3		66	6	7	10†	39	0.08		0.06	1.2	2	13	13	4	s.	Experiment Station.
Fairfax	Gregory		9	43.1	+ 6.4	75	2	12	10	45	0.80	+ 0.35	0.35	T.	4	19	7	4	s.	U. G. Stevenson.
Faith	Meade	2,560		38.5		66	17	16	10†	41	0.68		0.49	4.0	4	3	22	5	se.	Robert R. Saul.
Faulkton	Faulk	1,595	18	38.0	+ 8.5	66	6	9	14	40	0.35	− 0.11	0.20	2.0	2	21	1	8	nw.	Miss Belle Talcott.
Forestburg	Sanborn	1,231	21	37.0	+ 5.9	62	25	10	10	38	0.32	− 0.26	0.15	1.5	3	16	7	7	nw.	S. S. Judy.
Fort Meade	Meade	3,624	30	45.6	+10.8	72	6	20	10	45						27	3	0	s.	Post Hospital.
Goldfield	do	3,000		41.8		70	5†	16	10	48	0.26		0.23	3.0	2	18	11	1	e.	A. M. Alexander.
Greenmont	Lawrence	6,430	4								0.52		0.20	5.0	4	20	7	3	w.	H. C. Hoffbuhr.
Greenwood	Charles Mix		19	43.9	+ 7.1	72	2	18	10	42	0.90	+ 0.27	0.40	2.0	4	11	11	8	s.	T. C. Williamson.
Hardingrove	Stanley		1	40.5		68	1	16	26	44	0.07		0.07	0.8	1	21	4	5	nw.	Henry L. Theiman.
Hardy Ranger Station	Lawrence	6,600	3								0.40		0.18	3.2	4	19	6	5	nw.	Rufus J. Pilcher.
Harveys Ranch	do	6,282	3								0.10		0.10	1.0	1	21	7	2	nw.	Jerome Harvey.
Hermosa	Custer	3,278	7	42.1e		71e	17	12e	12	43e	0.14		0.11	T.	2				s.	S. M. Booth.
Highmore	Hyde	1,890	20	39.2	+ 6.5	68	2	11	10	41	0.03	− 0.43	0.03	0.2	1	15	6	9	sw.	Experiment Station.
Hopewell	Stanley		3	39.8		70	20	14	10	42	0.16		0.10	1.0	2	13	11	6	se.	E. R. Myers.
Hot Springs	Fall River	3,443		42.0		68	11	20	24†	35	0.70		0.30	0.5	3	19	4	7	s.	John S. Goodrell.
Howard	Miner	1,564	21	37.4f	+ 6.4	63f	7†	9f	10	41f	0.80	+ 0.19	0.45	1.0	4				se.	J. J. Cox.
Howell	Hand		11	37.4	+ 5.9	70	6	5	10	53	0.14	− 0.33	0.06	1.1	4	15	11	4	se.	M. A. Shuster.
Huron	Beadle	1,306	31	39.6	+12.2	68	6	14	10	40	0.14	− 0.44	0.09	0.7	2	10	12	8	s.	U. S. Weather Bureau.
Ipswich	Edmunds	1,530	16	36.6	+ 7.6	70e	6	1e	14	42e	0.21	− 0.21	0.18	2.5	2	9	18	3	nw.	H. J. Dailey.
Kadoka	Stanley	2,467	4	42.4		70a	11	17a	4	41e	0.31		0.22	0.9	2	12	11	7	se.	Glenn H. Shaw.
Kennebec	Lyman	1,689	20	41.0	+ 8.7	71e	2†	10e	10	46e	0.25	− 0.15	0.15	1.0	2	22	3	5		R. C. Van Horn.
Kimball	Brule	1,788	27	41.7	+ 9.6	70	2	15	10	37	0.10	− 0.41	0.10	2.0	1	22	5	3	nw.	G. D. Rose.
La Delle	Spink	1,400	16	38.5	+ 7.8	65	6	10	10	38	0.18	− 0.52	0.18	2.0	1	14	5	11	se.	E. L. Ebbert.
Lead	Lawrence	5,200	4	40.6		62	10	21	3†	34	0.19		0.11	0.4	5					Herbert Fuller.
Marion	Turner	1,447	12	42.1	+ 6.9	66	2	14	10	44	1.10	+ 0.23	0.40	1.0	3	8	13	9	se.	M. H. Dains.
Marston	Sully		5	35.4		64	6	9	10	42	0.10		0.05	0.5	3	12	7	11	nw.	J. W. Kozel.
Meadow	Perkins			36.8		63	6†	13	26	39	0.15		0.15	1.0	1	20	3	7	nw.	Hillard Wybenga.
Mellette	Spink	1,300	18	38.1	+ 7.9	67	6	10	14	40	0.41	− 0.12	0.21	3.1	3	21	3	6	nw.	Frank A. Howe.
Menno	Hutchinson	1,325	16	41.2	+ 6.9	70	17	15	9	40	0.90	+ 0.16	0.45	2.0	4				se.	J. S. Headley.
Milbank	Grant	1,148	22	37.9	+ 8.0	65	2†	10	14	38	1.17	+ 0.41	0.95	1.0	3	16	2	12	nw.	Miss Mary Patridge.
Mitchell	Davison	1,312	19	40.3	+ 7.3	66	2	14	10	36	0.96	+ 0.37	0.43	4.0	5	16	10	4	s.	C. W. Downey.
Mobridge	Walworth		2	41.0		68	6	16	14	41	0.20		0.15	2.0	2	18	12	0	nw.	Thomas J. Morris.
Murdo	Lyman	2,300	5	43.2d		70	20	20i	27	45i	T.		T.		0	26	1	3	s.	L. C. Bode.
Oelrichs	Fall River	3,339	21	39.6i	+ 5.8	68	11†	14k	24	54k	0.10	− 0.58	0.10		1	20	10	0	sw.	J. E. Strouse.
Onaka	Faulk	1,600	1													21	7	2	nw.	H. P. Camp.
Onida	Sully	1,921									0.10		0.05	0.5	2	10	15	5	se.	E. E. Heywood.
Orman	Butte	2,920	7	39.0		68	17	15	4	44	0.24		0.23	3.0	2	16	10	4	e.	U. S. Reclamation Service.
Ottumwa	Stanley		5	38.0		67	6†	9	30	51	0.06		0.06		1	16	10	4	nw.	J. W. Bretz.
Parkston	Hutchinson	1,400	1								1.21		0.42	4.0	5					W. C. Rempfer.
Pearl Creek	Beadle										0.25		0.20	T.	2					Charles Miner.
Pierre	Hughes	1,572	21	40.6	+ 9.0	71	20	16	10	36	0.11	− 0.32	0.07	0.4	3	13	10	7	e.	U. S. Weather Bureau.
Pine Ridge	Shannon		7	42.6		72	11	15	4†	46	0.03		0.03	0	1	13	7	10	s.	W. A. Spencer.
Plankinton	Aurora	1,528	19								0.89	+ 0.41	0.58	3.0	2	9	15	6	nw.	W. G. Andrews.
Pollock	Campbell		7	34.7		68	6	10	14	44	0.26		0.11	1.0	3	17	8	5	s.	J. H. Jones.
Rapid City	Pennington	3,251	25	41.5	+ 7.9	69	24	17	4	43	0.13	− 0.33	0.10	0.3	2	14	9	7	w.	U. S. Weather Bureau.
Redfield	Spink	1,295	15	38.9	+ 8.0	69	6	12	10	43	0.60	+ 0.21	0.20	2.0	4	19	3	8	sw.	A. S. Hall.

TABLE 1.—*Climatological data for November, 1913. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***South Dakota*—Contd.**																				
Rochford	Pennington	5,228	3								0.22		0.15	T.	2	13	12	5	nw.	Mrs. M. E. Deffenbaugh.
Rosebud	Todd	2,600	19	43.2	+ 8.4	72	11	17	4	42	0.75	+ 0.10	0.75	T.	1	14	15	1	sw.	W. M. Ege.
Roslyn	Day		7	36.4		64	2	11	10	36	0.17		0.12	1.7	2	16	7	7	nw.	O. C. Floren.
Sioux Falls	Minnehaha	1,400	22	39.6	+ 7.6	62a	3†	15	10	42a	0.93	+ 0.12	0.61	2.0	3	15	9	6	s.	J. H. Bechtold.
Sorum	Perkins		2	26.4d		63b	16	12	1†	44b	T.		T.	T.	0	12	8	10	nw.	M. S. Ebberhart.
Spearfish	Lawrence	3,647	24	42.8	+ 6.4	65	11†	22	13	34	0.08	− 0.54	0.08	0.5	1	17	8	5	sw.	A. E. Johnson.
Stephan	Hyde	1,840	9	38.2	+ 5.6	73	2	8	10	50	0.12	− 0.32	0.12	1.0	1	17	9	4	se.	Rev. A. Mattingly.
Tama	Meade		3																	E. J. Lehman.
Timber Lake	Dewey	2,163	1	39.8		66	6	16	26	35	0.48		0.30	7.0	2	1	25	4	nw.	W. E. Prann.
Tyndall	Bon Homme	1,418	16	42.3	+ 7.9	69	2	15	10	41	0.63	0.00	0.31	1.0	3	13	10	7	sw.	F. F. Chladek.
Vale	Butte	2,765	5	37.6		76	3	11d	29	47	0.14		0.14	T.	1	14	10	6	se.	U. S. Reclamation Service.
Vermilion	Clay	1,222	12	43.5	+ 6.1	68	20	14	10	35	0.58	− 0.35	0.40	1.0	3	17	3	10	s.	Prof. E. C. Perisho.
Waters Ranch	Lawrence	4,000	3								0.20		0.11	1.6	3	21	4	5	nw.	George Waters.
Watertown	Codington	1,735	19	37.4	+ 9.0	62	6†	11	1†	40	0.27	− 0.35	0.20	0.5	2	14	4	12	s.	Robert Q. Wood.
Wentworth	Lake		20	39.0	+ 9.3	61b	5†	5b	8	36b	0.90	+ 0.28	0.49	0.6	4	13	11	6	s.	R. C. Zimmerman.
White Lake	Aurora	1,646	4								0.45		0.25		2	15	1	14	s.	Mrs. G. A. Rogers.
Winner	Tripp	2,000	1	42.7		76a	11	17a	9	48a	0.51		0.40		3	15	10	5	sw.	J. W. Barnum.
Wood	Mellette			42.9a		75a	2†	17i	10	41i	0.37		0.34	0	2	19	4	7	sw.	Fred E. Kirch.
Yankton	Yankton	1,234	39	42.3	+ 8.8	69	17	17	10	34	0.80	+ 0.01	0.31	1.3	7	4	13	13	nw.	U. S. Weather Bureau.
Minnesota.																				
Pipestone	Pipestone	1,710	12	39.5	+ 7.8	61	5	13	10	33	1.06	+ 0.32	0.35	1.2	6	14	8	8	s.	A. L. Doan.
Colorado.																				
Arriba	Lincoln	5,243	7	41.7		72	10†	17	23	42	0.60		0.30	4.0	2	24	2	4	s.	C. A. Creel.
Auldhurst	Teller	8,500	3								0.43		0.26	6.6	3	15	8	7	se.	Harry Dunmire.
Bennett (near)	Arapahoe	5,484	5																	J. F. Egelhoff.
Boulder	Boulder	5,347	17	45.4	+ 2.2	70	11	19	30	36	0.00	− 0.75	0.00	0	0	9	20	1	w.	Prof. J. A. Hunter.
Burlington	Kit Carson	4,160	10	44.3	+ 4.1	74	10†	19	23	49	0.04	− 0.46	0.02	0	2	15	12	3	ne.	W. P. Davis.
Cassells	Park	8,445	3								0.67		0.45	10.2	4	23	3	4	w.	Charles F. Deininger.
Castle Rock	Douglas	6,220	21	39.0	+ 3.0	70	11	4	29	54	0.57	− 0.03	0.30	6.0	2	22	5	3	ne.	Thos. P. Vaughan.
Cheesman	Jefferson	6,890	10	41.2	+ 2.4	70	10	14	20	45	0.30	− 0.31	0.20	1.0	2	12	11	7	s.	Denver Union Water Co.
Cheyenne Wells	Cheyenne	4,279	21	43.6	+ 4.1	76	11	18	23	48	0.21	− 0.29	0.20	0.1	2	23	2	5	se.	J. W. Adams.
Denver	Denver	5,272	41	43.8	+ 4.6	75	11	17	30	40	0.38	− 0.14	0.23	2.8	3	20	8	2	s.	U. S. Weather Bureau.
Edgewater	Jefferson	5,450	5	41.6		75	10	12	29†	50	0.62		0.37	3.0	2	21	5	4		N. P. Levin, M. D.
Estes Pk. Fish Hatch.	Larimer	8,000	4								0.91		0.40	4.0	5	10	10	10	w.	G. H. Thomson.
Fort Collins	....do	4,985	34	39.4	+ 4.0	70	10†	11	23	51	0.17	− 0.27	0.13	1.5	2	6	17	7	n.	Colorado Agricultural College.
Fort Lupton (near)	Weld	4,907	3								0.38		0.16	2.0	3	21	7	2	s.	C. B. Benedict.
Fort Morgan	Morgan	4,319	15	42.2	+ 5.9	72	13	14	23	51	0.40	+ 0.03	0.40	4.0	1	28	0	2	se.	Great Western Sugar Co.
Frances	Boulder	9,300	8	36.1		55	10	12	29	34	1.08		0.51	13.2	7	13	14	3	w.	C. W. Barry.
Frys Ranch	Larimer	7,500	3	37.4		65	10	8	30	40	0.96		0.32	3.0	8	19	8	3	w.	Norman W. Fry.
Georgetown	Clear Creek	8,550	11								0.66	− 0.06	0.35	11.5	4	6	20	4		H. L. Corbett.
Greeley	Weld	4,649	22	41.8	+ 1.8	75	11	10	23	50	T.	− 0.52	T.	T.	0	15	12	3	e.	Kenneth Shaw.
Grover (near)	....do	5,076	9																	D. M. Porter.
Hartsel	Park	8,892	4								0.19		0.09	5.5	4	22	1	7	nw.	Emily Kleinknecht.
Hawthorne	Boulder	6,000	4								0.90		0.48	5.0	3	22	6	2		B. E. Chesebro.
Holyoke (near)	Phillips	3,745	17	37.0	− 1.3	74	11	3	23†	60	T.	− 0.34	T.	0	0	22	7	1	se.	A. C. Cauble.
Idaho Springs	Clear Creek	7,543	13	38.8	+ 3.9	66	10	6	29	37	0.51	+ 0.01	0.19	8.0	4	7	22	1	w.	J. J. Willis.
Julesburg	Sedgwick	3,465																		Great Western Sugar Co
Kersey	Weld	4,571									0.00		0.00	0	0	17	12	1	w.	Do.
Laporte	Larimer	5,053	22								0.31	− 0.18	0.29	0.2	2					P. A. Taft.
Le Roy (near)	Logan	4,380	24								T.	− 0.42	T.	0	0	14a	11a	4a	w.	Charles Green.
Longmont	Boulder	4,950	12	41.4	+ 7.7	74	10	12	22	50	0.93	+ 0.38	0.66	4.8	5	17	10	3	nw.	Great Western Sugar Co.
Longs Peak (near)	Larimer	8,600	18																	Enos A. Mills.
Merino	Logan										0.45		0.30	3.0	2	24	5	1		Great Western Sugar Co.
Moraine	Larimer	7,775	23	37.2	+ 3.5	60	10	5	29	45	T.	− 0.65	T.	T.	0	18a	11a	0a	w.	Chas. A. Chapman.
Platte Canon	Jefferson	5,492	14								0.47	+ 0.02	0.25	3.0	2	26a	2a	1a	s.	Denver Union Water Co.
St. Cloud	Larimer	7,750	10								0.51	+ 0.09	0.18	4.0	4	13	9	8	w.	Miss E. S. Cornelison.
Sedgwick	Sedgwick	3,539	5																	T. E. Bruce, M. D.
Silver Lake	Boulder	10,500	3																	City Engineer, Boulder.
Spicer (near)	Jackson	8,700	3	35.6		50	13	5	22	30	0.97		0.65	11.0	2	14e	9e	4e		Frank W. Murphy.
Sterling	Logan	3,892	4	38.0		77	13	2	24	59	T.		T.	T.	0	17	7	6	sw.	Great Western Sugar Co.
Waterdale	Larimer	5,206	10																	P. H. Boothroyd.
Wray	Yuma	3,512	17	43.0	+ 4.2	74	11	15	23	54	0.09	− 0.34	0.05		2	16	11	3	se.	J. C. Tuomey.
Yuma	....do	4,138	22								T.	− 0.42	T.	0	0	17	5	8	s.	Matthew Harr.
Nebraska.																				
Ainsworth	Brown	2,521	9	41.8		70	20†	12	10	45	0.72		0.42	T.	4	6	17	7	sw.	John M. Cotton.
Albion	Boone	1,747	14	41.0e	+ 5.8	69e	16	10e	10	48i	1.28	+ 0.51	0.75		3					F. M. Weitzel.
Alliance	Boxbutte	3,968	20	37.4	+ 2.9	69	11	8	29	52	0.10	− 0.26	0.10	T.	1	22	6	2	nw.	J. A. Keegan.
Alma	Harlan	1,939	15	42.6	+ 2.5	72	20	11	10	48	0.78	− 0.04	0.45		6	13	12	5	s.	W. A. Sharpnack.
Arcadia	Valley	2,186	16								0.67	+ 0.22	0.42		2				sw.	J. L. Owen.
Arden	Wheeler		3								0.47		0.19	0.3	5	16	7	7	s.	A. E. Johns.
Ashland	Saunders	1,100	30	46.6	+ 7.3	72	20	21	10†	40	1.65	+ 0.68	0.89		6	16	6	8	sw.	Dr. A. S. V. Mansfelde.
Ashton	Sherman	2,061	20								0.56	− 0.03	0.41		3	14	5	11	s.	F. Rein.
Atkinson	Holt	2,108	8	41.7		70	2	15	10	49	0.48		0.32		3					C. J. Wilson.
Auburn	Nemaha	1,051	21	47.6	+ 6.5	74	20	20	10	41	1.21	− 0.13	0.70	0	6	18	1	11	n.	J. R. Huffman.
Aurora	Hamilton	1,792	20								1.65	+ 0.71	1.06		3	12	10	8	ne.	A. D. Travis.
Beatrice	Gage	1,235	23	45.6	+ 6.0	70	20†	20	10	37	0.83	− 0.22	0.34	0	3	13	2	15	s.	H. E. Palmer.
Beaver City	Furnas	2,147	22	45.4	+ 5.0	70	20	10	24	48	0.59	− 0.11	0.36		4	16	8	6	se.	T. M. Davis.
Bellevue	Sarpy	1,210	31	46.9	+ 8.7	73	20	20	8	39	1.60	+ 0.29	0.70	0	6	14	5	11	se.	A. A. Tyler.
Benkelman	Dundy	2,968																		R. D. Druliner.
Bertrand	Phelps	2,515	6								0.44		0.25		2	14	11	5	se.	W. F. Dobbin.
Blair	Washington	1,122	18	43.8	+ 4.7	72	20	18	10	37	1.02	− 0.26	0.71		6	14	3	13	sw.	D. C. Van Deusen.
Blake	Garfield		1								0.55		0.33	T.	3	8	17	5	s.	H. C. Mead.
Bloomfield	Knox		7	41.8		68	5	15	10	41	0.60		0.30	0.5	3	7	16	7	nw.	Dr. L. C. Bleick.
Bradshaw	York	1,715	16								1.75	+ 0.52	1.00	0	3	10	13	7		E. C. Roggy.
Brewster	Blaine		2								0.27		0.20	0	2	20	6	4	sw.	W. S. Turnbull.
Bridgeport	Morrill	3,658	17	40.6d	+ 3.6	76e	11	8d	29	56e	T.	− 0.35	T.		0				nw.	R. H. Willis.
Broken Bow	Custer	2,477	19	44.6	+ 7.9	75	16	10	9	50	1.27	+ 0.77	0.96	0	4	20	1	9	s.	R. V. McCall.
Bruning	Thayer	1,583	3								1.56		1.15	0	4	11	9	10	s.	Henry Middendorf.
Burge	Cherry	2,674	6	40.6		75	11	12	10	50	T.		T.	T.	0	20	4	6	w.	H. A. Davis.
Burwell	Garfield	2,180	21								0.50	+ 0.05	0.31		3					W. L. McMullen.
Butte	Boyd		7	43.0		75	2	13	10	47	0.48		0.28	0.5	3	14	11	5	nw.	W. Whitla.

TABLE 1.—*Climatological data for November, 1913. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Continued.																				
Cairo	Hall	1,951	5								1.29		0.75		3					
Callaway	Custer	2,555	21	46.4	+ 8.5	76	17	18	4	51	2.04	+ 1.41	1.25		2	11	8	11	s.	J. H. Evans.
Cambridge	Furnas	2,258	7	44.6		74	20	12	10†	46	0.68		0.42		2	11	8	11	s.	Chas. Jensen.
Columbus	Platte	1,442	21	44.6	+ 7.1	73	18	11	10	51	0.95	+ 0.14	0.67	0	2	2	23	5	sw.	A. L. Rush.
Crete	Saline	1,368	30	45.8	+ 6.9	68	16	18	10	40	2.39	+ 1.47	1.08	0	5	15	3	12	s.	Doane College.
Culbertson	Hitchcock	2,565	27	43.4	+ 3.4	73	20†	13	1	57	0.50	+ 0.05	0.47		2	13	9	8	se.	Homer L. Nye.
Curly	Sioux																			A. E. Hann.
Curtis	Frontier	2,553	17	42.7	+ 4.2	68	21	13	10†	42	0.14	− 0.38	0.12		2	14	8	8	se.	Dr. S. R. Razee.
Dalton	Cheyenne	4,273																		J. C. Frandsen.
David City	Butler	1,619	24	45.0	+ 8.6	70	20†	16	10	40	1.34	+ 0.37	0.89	0	5	12	9	9	se.	S. Clingman.
Du Bois	Pawnee	1,074	9								1.22		0.80		4	14	6	10	s.	O. M. Backus.
Dumas	Garfield		4	42.1		72	17	9	9	42	0.37		0.26		2	19	5	6	sw.	Emile Raes.
Elm Creek	Buffalo	2,268	6								0.69		0.40		3					E. L. Sutton.
Elsie	Perkins	3,382	6								0.06		0.05		2					J. F. Brittain.
Ericson (near)	Garfield	2,029	22								0.57	+ 0.16	0.55		2	19	8	3	sw.	J. A. Bodyfield.
Ewing	Holt	1,888	23	41.6		74	17	12	10†	50	0.67	+ 0.22	0.30	T.	4					G. H. Benson.
Exeter	Fillmore	1,607	2								2.25		1.75		2					Frank Ainsworth.
Fairbury	Jefferson	1,316	37	47.2	+ 6.9	73	18	17	10	42	2.04	+ 1.07	1.11	0	4	12	9	9	se.	W. F. Cramb.
Fairmont	Fillmore	1,641	21	43.6	+ 5.7	72	11	13	11	59	1.99	+ 1.11	1.29	0	3	14	9	7	s.	C. B. & Q. R. R. Co.
Falls City	Richardson	898	19	49.6	+ 6.1	76	20	22	10	36	3.48	+ 1.84	1.98	0	6	16	6	8	se.	Dr. J. C. Yutzy.
Ft. Robinson	Dawes	3,764	31	41.8	+ 6.4	76	11	16	29	50	0.17	− 0.20	0.10	0.7	2	18	8	4	w.	Post Surgeon.
Franklin	Franklin	1,820	23	43.3	+ 4.4	72	19	13	10†	44	1.30	+ 0.52	0.85	0	4	8	9	13	s.	A. R. Peck.
Fremont	Dodge	1,203	33	44.6	+ 7.6	72	20	19	10	38	0.72	− 0.31	0.44		3	5	11	14	nw.	Ernest Hahn.
Fullerton	Nance	1,629		42.6		70	20	12	10	50*						15	7	8	s.	Dr. F. W. Johnson.
Geneva	Fillmore	1,633	24	46.0	+ 7.1	69	20†	15	10	42	1.83	+ 0.87	1.26		3	10	11	9	sw.	F. M. Flory.
Genoa	Nance	1,584	38	44.0	+ 8.3	70	16	13	10	47	1.35	+ 0.55	0.98	T.	6	15	6	9	nw.	F. W. Parsons.
Gordon	Sheridan	3,550																		G. F. Williams.
Gosper	Gosper		12								0.84	+ 0.25	0.59	0	2	15	8	7	s.	E. H. Stoll.
Gothenburg	Dawson	2,557	20	43.0	+ 4.7	72	17†	14	10	45	1.03	+ 0.31	0.65	0	5	18	8	4	s.	S. S. Kaufman.
Grand Island	Hall	1,860	22	45.6	+ 7.7	69	20	17	10	33	1.52	+ 0.69	0.90	0	4	12	3	15	s.	E. A. Barnes.
Grant	Perkins	3,405	8	43.6		82	11	10	23	61	T.		T.		0	18	6	6		Anson K. Holmes.
Greeley	Greeley	2,021	18	44.6		69	16	12	10	43	0.71	+ 0.22	0.38	0.5	5	15	8	7	se.	W. E. Morgan.
Guide Rock	Webster	1,646	14								2.34	+ 1.35	1.80		3	7	10	13		J. S. Marsh.
Haigler	Dundy	3,258	19								0.00	− 0.41	0.00	0	0					J. L. Pember.
Halsey	Thomas	2,695	11	43.0	+ 4.1	76	11	13	10	52	0.02	− 0.35	0.01		2	24	2	4	se.	Bureau of Forestry.
Hartington	Cedar	1,309	22	43.4	+ 9.0	72	20	15	10	40	0.43	− 0.56	0.22	0.5	4	4	15	11	se.	D. E. Ewing.
Hastings	Adams	1,932	23	43.4	+ 4.9	70	16	18	10	43	2.16	+ 1.33	1.25		3	11	8	11	sw.	C. B. & Q. R. R. Co.
Hayes Center	Hayes		20	45.6		72	11	19	10	50	1.12	+ 0.43	0.76		3	23	4	3		Jos. M. Crosby.
Hay Springs	Sheridan	3,821	27	40.6	+ 7.0	70	11	13	29	51	T.	− 0.60	T.	T.	0	12	17	1	sw.	A. Kadlecek.
Hebron	Thayer	1,458	28	47.0	+ 7.5	72	18	18	10	35	1.52	+ 0.34	1.04	0	2					Dr. C. M. Easton.
Hemingford	Boxbutte	4,256	5								0.11		0.11		1					A. S. Enyeart.
Hendley	Furnas	2,231	9								0.85		0.50		3					T. L. Jones.
Hershey	Lincoln	2,902	3								0.10		0.08		2	17	2	11		G. F. Palmer.
Hillside	McPherson	3,484	5	41.0		76	11	4	24	63	0.10		0.04	T.	5	14	9	7	sw.	Mrs. M. R. Lloyd.
Holdrege	Phelps	2,324	23	43.0	+ 4.7	70	20†	15	11	46	0.32	− 0.34	0.22		2	12	6	12	s.	C. B. & Q. R. R. Co.
Hooper	Dodge	1,228	16	42.8	+ 5.4	72	20	13	10	39	0.92	− 0.27	0.58		3	8	10	12	se.	Dr. W. H. Heine.
Hull (near)	Banner																			Mrs. W. P. Miller.
Imperial	Chase	3,278	23	42.5	+ 4.6	74	2	10	23	54	0.32	− 0.20	0.12	T.	3	15	4	11	nw.	Robt. Malcolm.
Kearney	Buffalo	2,146	25	45.0	+ 6.0	71	16	15	10	45	0.58	− 0.03	0.35		3	14	11	5	s.	City Engineer.
Kimball	Kimball	4,697	25	41.8	+ 5.5	77	11†	9	30	56	T.	− 0.38	T.	T.	0	16	11	3	w.	F. J. Bellows.
Kirkwood	Rock		19	43.2	+ 8.1	76	11	10	10	51	0.46	− 0.08	0.20		4	16	9	5	s.	Mrs. C. Arter.
Kowanda	Garden		5								0.08		0.08	0	1					Geo. W. Hulse.
Lexington	Dawson	2,385	25	43.8	+ 6.3	71	20†	13	10	49	0.88	+ 0.32	0.51		3	20	4	6	ne.	Robt. Chadwick.
Lincoln	Lancaster	1,189	32	46.4	+ 8.4	72	20	19	10	39	2.43	+ 1.58	1.37	0	7	11	8	11	s.	U. S. Weather Bureau.
Lodgepole	Cheyenne	3,820	14	42.8	+ 6.0	75	11	10	24	52	0.07	− 0.12	0.07	T.	1	13	10	7	nw.	R. T. Kidney.
Loup City	Sherman	2,067	19	41.4	+ 4.3	68	16	10	10†	50	0.59	+ 0.01	0.30		3	23	5	2	se.	Harriet Hayhurst.
Loyal	Custer		4								0.21		0.16		3					Jas. H. Bailey.
Lynch	Boyd		18								0.31	− 0.36	0.19	1.0	2	19	7	4	nw.	Anton Basta.
McCook	Redwillow	2,506	20	42.8	+ 4.6	72	20	15	24	48	0.43	− 0.16	0.28	0	2	22	8	0	w.	E. J. Brady.
McCool Junction	York	1,575	15								2.20	+ 1.08	1.31		4					L. L. Slagel.
Madison	Madison	1,585	21								1.15	+ 0.23	0.55		3					Dr. F. A. Long.
Marquette	Hamilton	1,830	34								1.54	+ 0.76	0.88	0	4					John Ellis.
Mary	Brown		3								0.25		0.15		3	19	7	4	sw.	G. C. Stufft.
Mason City	Custer	2,257	11								0.65	+ 0.12	0.45		3					J. A. Amsberry.
Minatare	Scotts Bluff	3,825	4								0.03		0.03		1	26	3	1	nw.	A. Kennedy.
Minden	Kearney	2,169	36	44.4	+ 6.9	70	16	16	10	41	0.91	− 0.02	0.54	0	6	10	9	11	s.	Joel Hull.
Mitchell	Scotts Bluff	3,950	5	41.1		74	11	10	29	52	0.16		0.08	0.1	3	15	8	7	w.	U. S. Reclamation Service.
Nebraska City	Otoe	941	36	46.3	+ 7.3	76	21	20	11	38	1.92	+ 0.85	1.32		4	13	8	9	s.	C. B. & Q. R. R. Co.
Nelson	Nuckolls	1,683	3	46.2		71	20	17	10	46	2.35		1.55		3	15	5	10	s.	Mack I. Koser.
Norfolk	Madison	1,532	29	43.2	+ 8.4	70	19	16	10†	44	1.05	+ 0.28	0.57	T.	4	18	6	6	s.	Dr. P. H. Salter.
North Loup	Valley	1,961	26	43.5	+ 6.7	75	20	12	10	49	0.71	+ 0.17	0.40		2	13	10	7	nw.	W. G. Rood.
North Platte	Lincoln	2,841	40	42.6	+ 7.5	75	11	14	23	54	0.14	− 0.26	0.11	T.	4	12	7	11	w.	U. S. Weather Bureau.
Oakdale	Antelope	1,722	26	40.6	+ 6.4	66	20	13	10	38	0.61	− 0.03	0.28	0.5	4	10	10	10	s.	G. S. Clingman.
Omaha	Douglas	1,103	43	46.4	+ 8.7	72	20	22	10	30	1.15	+ 0.09	0.55	0	8	4	14	12	s.	U. S. Weather Bureau.
O'Neill	Holt	1,975	16								0.53	+ 0.05	0.51	T.	2	14	10	6	nw.	L. E. Best.
Ord	Valley	2,062	19								0.69	+ 0.14	0.36		4	12	8	10	n.	Jas. Milford.
Orleans	Harlan	1,993	6								1.04		0.50		5					Jas. McGeachin.
Osceola	Polk	1,644	16			71	19	12	10	43	1.62	+ 0.68	0.83		3	14	14	2	s.	G. T. Ray.
Oshkosh	Garden	3,393	1	41.4		76	11	12	24†	56	0.06		0.06		1	21	6	3	nw.	Robert Quelle.
Palisade	Hitchcock		5								0.25		0.18		2					E. E. Young.
Pawnee City	Pawnee	1,175	19	45.6	+ 4.1	66	5†	20	10†	39	1.11	− 0.61	0.86		2	20	2	8	s.	F. A. Barton.
Paxton	Keith	3,060	4	42.4		77	11	10	24†	60	T.		T.		0	23	3	4	s.	C. F. Coy.
Plymouth	Jefferson	1,419	9	45.6		71	18	17	10	42	1.92				4	10	9	11	sw.	Dora Ruppel.
Purdum	Blaine		12	42.9	+ 4.9	77	11	12	10	55	0.10	− 0.43	0.06		3	18	7	5	nw.	T. C. Jackson.
Ravenna	Buffalo	2,028	36	43.0	+ 5.6	70	16	12	10	45	0.80	+ 0.15	0.42		4	14	3	13	s.	H. G. Smith.
Red Cloud	Webster	1,687	22	46.4	+ 7.0	72	20†	16	10	46	2.42	+ 1.58	1.73	T.	3	14	4	12	ne.	Chas. S. Ludlow.
St. Libory	Howard	1,887	19								1.22	+ 0.33	0.82	0	3	12	11	7	sw.	W. I. Meader.
St. Paul	do	1,796	21	44.2	+ 5.3	71	16	15	10	51	0.90	+ 0.06	0.56	T.	4	16	7	7	se.	Paul Anderson.
Santee	Knox																			A. M. MacGregor.
Schuyler	Colfax	1,357	20	44.0		73	20	12	10	47	1.15	+ 0.31	0.69		4	17	6	7	nw.	F. W. Shonka, jr.
Scottsbluff	Scotts Bluff	3,888	25	41.0	+ 4.4	76	11	12	24†	53	0.13	− 0.23	0.08	0.8	3	19	6	5	nw.	A. B. McCoskey.
Seward	Seward	1,435	23	45.4	+ 6.2	71	20	12	10	42	1.39	+ 0.34	0.87		3	13	7	10		C. B. & Q. R. R. Co.
Sidney	Cheyenne	4,090	21								0.10	− 0.18	0.10		1	27	2	1	nw.	John P. Fischer.
Springfield	Sarpy	1,052	2								1.00		0.50	0	6	15	9	6	sw.	L. A. Bates.
Springview	Keyapaha																			C. L. Phelps.
Stanton	Stanton	1,472	22	42.7	+ 6.8	64	5	13	10	42	0.90	− 0.02	0.50		2	6	23	1	sw.	Alfred Pont.
Stapleton	Logan																			F. E. Peterson.

TABLE 1.—*Climatological data for November, 1913. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Continued.																				
Stratton	Hitchcock	2,804	18	.....	.....	.....	.....	.....	.....	.....	0.10	− 0.59	0.10	.....	1	.....	.....	.....	.....	Miss Stella Vennum.
Superior	Nuckolls	1,574	28	.....	.....	.....	.....	.....	.....	.....	1.75	+ 0.88	1.25	.....	2	.....	.....	.....	.....	F. V. Bishop.
Syracuse	Otoe	1,059	21	46.6	+ 7.4	72	20	20	10†	46	1.58	+ 0.39	1.10	.....	5	15	5	10	se.	W. N. Hunter.
Table Rock	Pawnee	1,023	24	.....	.....	.....	.....	.....	.....	.....	1.53	+ 0.03	1.10	.....	5	19	5	6	s.	E. D. Howe.
Tecumseh	Johnson	1,113	36	48.2	+ 8.4	72	20	21	9	35[a]	1.12	− 0.06	0.63	.....	4	.....	.....	.....	.....	Dr. C. H. Davies.
Tekamah	Burt	1,060	22	44.7	+ 6.9	72	20	19	11	37	0.87	− 0.29	0.50	.....	4	8	10	12	s.	Dr. A. D. Nesbit.
University Farm	Lancaster	.....	30	46.0	+ 5.8	72	20	18	10	43	2.40	+ 1.37	1.83	0	6	9	11	10	.....	S. W. Perin.
Upland	Franklin	2,158	1	.....	.....	.....	.....	.....	.....	.....	1.29	.....	0.80	.....	2	5	18	7	sw.	L. P. Zettle.
Valentine	Cherry	2,613	25	42.1	+ 8.4	75	11	16	4	46	0.45	− 0.28	0.23	T.	5	16	8	6	sw.	U. S. Weather Bureau.
Wahoo	Saunders	1,187	11	.....	.....	.....	.....	.....	.....	.....	2.33	+ 0.97	1.10	.....	4	11	10	9	.....	W. T. Mauck.
Wakefield	Dixon	1,387	20	42.5	+ 5.7	70	20	14	10	43	0.77	− 0.24	0.25	0.7	6	8	11	11	s.	I. H. Weaver.
Walthill	Thurston	.....	10	42.8	.....	70	20	17	10	38	0.77	− 0.30	0.32	0	4	10	9	11	s.	G. A. Dudley.
Watertown	Buffalo	2,299	8	.....	.....	.....	.....	.....	.....	.....	0.82	.....	0.58	.....	2	11	13	6	s.	R. E. Swift.
Wauneta	Chase	2,935	15	.....	.....	.....	.....	.....	.....	.....	0.30	− 0.36	0.15	.....	2	.....	.....	.....	.....	C. D. Fuller.
Weeping Water	Cass	1,080	36	45.6	.....	73	20	17	9	46	2.16	+ 0.88	1.53	.....	5	16	1	13	nw.	S. W. Orton.
Westpoint	Cuming	1,313	26	44.3	+ 5.5	71	19	17	10	38	1.49	+ 0.41	0.65	0	4	15	5	10	e.	J. C. Elliott.
Wisner	do	1,380	17	.....	.....	.....	.....	.....	.....	.....	1.41	+ 0.19	0.72	.....	4	.....	.....	.....	.....	F. C. Evans.
York	York	1,633	25	45.7	+ 7.0	71	16	13	10	44	1.73	+ 0.88	1.22	0	3	16	5	9	sw.	A. T. Glauque.
Iowa.																				
Afton	Union	1,212	19	46.4	+ 9.6	71	20	20	11	31	2.44	+ 1.21	1.02	0	7	8	8	14	sw.	N. W. Rowell.
Allerton	Wayne	.....	11	46.4[d]	+ 5.8	73	20	20	11	33[d]	1.40	− 0.45	0.88	0	8	.....	.....	.....	s.	Maude Chase.
Alton	Sioux	1,305	8	40.8	.....	66	20	16	10	38	0.41	.....	0.16	0	6	11	12	7	nw.	W. S. Slagle.
Atlantic	Cass	1,164	22	44.8	+ 9.4	72	20	19	11	35	1.28	+ 0.30	0.62	T.	10	6	7	17	sw.	Thos. H. Whitney.
Audubon	Audubon	1,301	19	42.8	+ 7.6	68	20	19	10†	33	1.36	+ 0.02	0.36	0	10	7	5	18	sw.	Geo. E. Kellogg.
Bedford	Taylor	.....	13	46.5	+11.1	72	20	16	11	44	2.16	+ 0.87	1.03	0	6	11	6	13	s.	E. E. Healy.
Centerville	Appanoose	1,013	3	47.8	.....	73	20	17	1	40	1.26	.....	1.10	0	4	12	15	3	w.	Gordon Peacock, jr.
Chariton	Lucas	1,042	18	46.1	+ 7.4	74	20	18	11	43	2.84	+ 1.54	2.40	0	2	8	10	12	sw.	C. C. Burr.
Clarinda	Page	1,009	23	45.0	+ 7.2	73	20	16	1	41	1.17	+ 0.01	0.40	0	7	12	8	10	se.	A. S. Van Sandt.
Corning	Adams	1,117	21	44.9	+ 7.7	72	20	18	11	35	3.49	+ 2.29	1.89	T.	5	13	3	14	sw.	Jerome Smith.
Corydon	Wayne	1,101	20	47.6	+ 8.9	72	20	18	11	38	1.26	− 0.19	0.83	0	9	9	6	15	sw.	May C. Miller.
Council Bluffs	Pottawattamie	990	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. W. Crossley.
Creston	Union	1,312	8	44.2	.....	71	20	18	9	44	1.11	.....	0.61	0	7	11	3	16	sw.	O. J. Colby.
Cumberland	Cass	.....	14	.....	.....	.....	.....	.....	.....	.....	0.87	− 0.11	0.60	0	2	15	7	8	sw.	J. H. Reppert.
Denison	Crawford	1,180	19	44.4	+ 8.8	72	20	18	10	39	0.88	− 0.13	0.32	T.	8	13	3	14	n.	W. C. Van Ness.
Elliott	Montgomery	.....	8	46.0	.....	73	20	19	11	36	1.38	.....	0.75	0	3	7	8	15	ne.	C. H. Westrope.
Greenfield	Adair	.....	21	45.4	+ 8.8	73	20	19	10	38	1.75	+ 0.58	1.00	T.	6	7	13	10	sw.	Frank A. Ward.
Harlan	Shelby	1,182	14	43.6	+ 6.4	71	20	18	11	36	0.88	− 0.16	0.38	T.	7	8	7	15	s.	C. A. Reynolds.
Inwood	Lyon	1,474	9	41.0	.....	63	2†	14	10	39	1.64	.....	0.98	2.0	6	15	4	11	nw.	F. B. Hanson.
Lake Park	Dickinson	1,479	....	40.5	.....	66	2†	14	10†	36	0.20	.....	0.20	2.0	1	13	7	10	s.	A. E. Woodruff.
Lamoni	Decatur	1,120	6	47.2	.....	78	19	23	10†	31	2.33	.....	1.53	0	6	19	1	10	s.	Prof. I. M. Stubbart.
Le Mars	Plymouth	1,224	17	42.2	+ 7.7	65	20	16	10	34	0.30	− 0.93	0.16	2.0	5	10	9	11	nw.	G. A. C. Clarke.
Lenox	Taylor	1,250	18	46.2	+ 8.3	71	20	21	9†	29	2.51	+ 1.29	1.27	T.	6	17	3	10	s.	J. L. Hurley.
Leon	Decatur	1,120	11	46.6	+ 6.0	72	20	19	10†	32	1.35	− 0.57	1.00	0	3	13	2	15	s.	Morris Gardner.
Little Sioux	Harrison	.....	8	44.4	.....	73	20	13	10	42	0.87	.....	0.40	0	6	8	7	15	se.	Geo. H. Gibson.
Logan	do	928	46	45.6	+ 9.7	72	20	17	9	35	1.32	+ 0.07	0.52	0	6	9	8	13	sw.	Glenn H. Stern.
Mount Ayr	Ringgold	1,236	20	47.0	+ 8.1	72	20	22	9†	32	2.74	+ 1.38	1.45	0	7	12	5	13	s.	Alex. Maxwell.
Murray	Clarke	1,216	22	46.4	+ 9.7	73	20	20	11	33	1.47	+ 0.38	0.94	0	6	7	11	12	sw.	M. T. Ashley.
Northboro	Page	1,046	1	47.3	.....	74	20	21	11	35	1.62	.....	0.94	0	5	12	6	12	sw.	J. M. Darby.
Odebolt	Sac	1,356	16	43.8	+ 7.3	70	20	16	10	36	0.76	− 0.38	0.30	1.5	4	15	1	14	.....	E. Starner.
Onawa	Monona	1,051	13	44.7	+ 6.4	70	20	20	9†	36	0.72	− 0.76	0.30	0.2	7	8	11	11	nw.	C. G. Perkins.
Pacific Junction	Mills	960	14	44.9	+ 5.8	71	20	16	9	35	1.49	+ 0.55	0.93	0	5	11	12	7	s.	H. H. McCartney.
Rock Rapids	Lyon	1,358	14	37.6	+ 5.7	62	2	20	5†	39	1.33	+ 0.27	0.75	2.0	3	12	9	9	s.	W. C. Wyckoff.
Sheldon	O'Brien	1,422	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Aupperle.
Sibley	Osceola	1,212	20	40.0	+ 8.0	61	5†	15	10	38	1.16	+ 0.17	0.43	2.0	7	9	8	13	nw.	H. G. Doolittle.
Sioux Center	Sioux	.....	14	40.2	+ 4.9	60	5	13	13	33	0.79	− 0.08	0.32	3.0	4	14	5	11	s.	J. de Ruyter.
Sioux City	Woodbury	1,135	24	43.2	+ 8.9	69	20	19	10	28	0.61	− 0.36	0.28	0.9	7	5	12	13	s.	U. S. Weather Bureau.
Spencer	Clay	.....	3	41.8	.....	65	20	15	10	34	0.77	.....	0.32	0	4	.....	.....	.....	s.	S. Gillespie.
Thurman	Fremont	.....	16	45.6	+ 7.0	70	20	18	11	44	1.87	+ 0.57	1.15	0	4	5	14	11	sw.	C. R. Paul.
Washta	Cherokee	1,157	15	43.3	+ 6.8	65	6†	15	10	42	0.40	− 0.57	0.27	1.0	3	11	5	14	s.	H. L. Felter.
Kansas.																				
Abilene	Dickinson	1,157	18	.....	.....	.....	.....	.....	.....	.....	1.60	+ 0.49	1.18	0	5	10	4	16	se.	T. W. Sherman.
Agricultural College	Riley	1,100	55	50.1	+ 8.8	76	20	19	10	43	1.92	+ 0.54	1.11	0	8	15	4	11	w.	Prof. J. O. Hamilton.
Alton	Osborne	1,651	11	47.3	.....	75	20	17	10	47	1.37	+ 0.35	0.85	0	3	13	7	10	s.	H. A. Storer.
Atchison	Atchison	973	22	50.7	+ 8.3	75	20	26	10†	35	1.94	+ 0.50	1.37	0	4	17	6	7	s.	Prof. E. M. Stahl.
Beloit	Mitchell	1,383	18	47.4	.....	75	18	17	10	46	1.92	+ 0.95	1.67	0	2	11	10	9	se.	F. A. Slack.
Blakeman	Rawlins	2,894	16	43.6	+ 3.6	77	2	13	10†	55	0.51	− 0.07	0.24	0	3	14	5	11	se.	C. L. Henderson.
Blue Rapids	Marshall	1,105	7	.....	.....	.....	.....	.....	.....	.....	2.40	.....	1.20	0	5	11	0	19	.....	M. Norton.
Cawker City	Mitchell	1,473	5	47.8	.....	73	17	18	10	45	1.58	.....	1.21	0	5	11	8	11	ne.	J. W. Higgins.
Centralia	Nemaha	1,256	4	48.6	.....	75	20	19	9†	39	1.20	.....	0.84	0	5	11	8	11	sw.	N. S. Hazen.
Chapman	Dickinson	1,113	9	50.0	.....	72	12†	21	10	40	.....	.....	.....	0	....	8[b]	7[b]	13[b]	sw.	W. S. Robb.
Clay Center	Clay	1,203	12	48.8	+ 7.5	74	20	17	10	40	1.03	− 0.46	0.83	0	2	9	2	19	sw.	O. L. Slade.
Colby	Thomas	3,138	22	45.7	+ 5.8	73	11	20[d]	23	44	0.56	+ 0.02	0.25	T.	8	13	14	3	sw.	G. H. Kinkel.
Concordia	Cloud	1,398	29	48.7	+ 8.8	74	18	22	10	40	1.90	+ 0.96	1.35	0	8	7	9	14	s.	U. S. Weather Bureau.
Densmore	Norton	2,200	4	46.0	.....	70	20	20	10†	40	0.89	.....	0.64	0	2	19	1	10	s.	Miss Irene Vaughn.
Dresden	Decatur	2,731	19	46.0	+ 4.5	75	20	21	10	41	0.67	0	0.36	0	2	13	9	8	ne.	Jacob Bock.
Ellsworth	Ellsworth	1,537	9	48.8	.....	74	11†	22	10	43	1.46	.....	0.90	T.	6	8	13	9	s.	Geo. Seitz.
Emmett	Pottawatomie	1,024	1	.....	.....	.....	.....	.....	.....	.....	1.28	.....	0.43	0	7	16	9	5	s.	Frank Zima.
Eskridge	Wabaunsee	1,412	7	49.6	.....	73	20	20	10	35	3.43	.....	1.65	0	7	11	9	10	s.	Geo. D. West.
Farnsworth	Lane	2,850	12	46.0	+ 3.2	78	11	11	10	59	0.93	+ 0.08	0.30	T.	5	18	5	7	sw.	C. M. Jennison.
Fort Scott	Bourbon	857	38	53.6	+ 7.5	76	19†	23	12	50	1.27	− 1.17	0.76	0	6	17	0	13	sw.	E. A. Shaver.
Frankfort	Marshall	1,146	19	50.6	+ 8.6	78	7	19	10	40	0.98	− 0.56	0.98	.....	1	9[a]	10[a]	10[a]	nw.	W. W. Watson.
Garnett	Anderson	950	7	53.4	.....	75	19	23	10	34	1.34	.....	0.65	0	7	7	14	9	s.	D. D. Judy.
Goodland	Sherman	3,687	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. C. Calvert.
Grainfield	Gove	2,813	....	45.2	.....	71	11	21	10	46	0.58	.....	0.37	0	6	15	3	12	e.	C. A. Bolster.
Hanover	Washington	1,225	16	49.0	+ 7.1	74	21	20	10	39	2.03	+ 0.83	1.64	0	3	12	5	13	s.	A. Jaedicke, jr.
Harrison	Jewell	1,804	12	46.8	+ 5.7	73	17	18	10	46	2.00	+ 1.12	1.33	0	3	19	2	9	s.	Mahlon Tegley.
Hays	Ellis	2,000	45	45.6	+ 4.7	76	11	12	10	53	0.72	− 0.04	0.25	0	7	7	13	10	sw.	G. K. Helder.
Hill City	Graham	2,134	5	45.0[i]	.....	72[i]	15	18[i]	23	43[i]	0.76	.....	0.60	.....	2	7[i]	10[i]	4[i]	s.	C. A. G. Inlow..
Holton	Jackson	1,043	2	49.6	.....	74[e]	18†	21	10†	39	1.79	.....	0.87	0	5	11	13	6	s.	Miss Thamer Richey.
Horton	Brown	1,188	24	49.3	+ 7.6	75	20	22	10	36	1.33	+ 0.01	0.90	0	7	10	6	14	s.	Mrs. S. C. Belden.
Hoxie	Sheridan	2,700	14	45.9	+ 5.2	70	16†	15	9	48	0.68	+ 0.01	0.47	0	3	11	10	9	s.	I. L. Vinson.

TABLE 1.—*Climatological data for November, 1913. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Kansas—Continued.																				
Lawrence	Douglas	997	45	51.2	+ 9.6	74	19	24	10	36	2.30	+ 0.45	0.85	0	6	5	7	18	sw.	F. E. Kester.
Leavenworth	Leavenworth	913	69	50.8	+ 9.3	74	20	22	11	31	2.55	+ 0.47	1.15	0	6	13	5	12	s.	Dr. A. F. Yohe.
Lebanon	Smith	1,812	15	45.4	+ 5.3	71	18	19	10	38	2.20	+ 1.42	1.33	0	4	14	1	15	s.	E. V. Bower.
Lenora	Norton	2,300									0.86		0.48	0	6					J. S. Goodrich.
Leoti	Wichita	3,300	10	44.0		79	11	17	10†	57	0.54		0.32	T.	5	18	4	8	ne.	L. E. Gorsuch.
Lincoln	Lincoln	1,374	1	48.7		74	18	18	10	42	1.18		0.57		6	9	6	15	sw.	R. W. Greene.
Lindsborg	McPherson	1,333	7								2.11		1.92	0	2	3	4	23	s.	A. J. Fredrickson.
McCracken	Rush	2,139	1	47.0		77	11	19	10	52	1.07		0.36	0	5	14	9	7	ne.	E. D. Floyd.
Manhattan	Riley	1,014	21	50.9	+ 8.3	76	20	20	10	42	1.83	+ 0.45	1.23	0	4	4	8	18	s.	C. P. Blachly.
Minneapolis	Ottawa	1,259	23	48.9	+ 7.4	73	18	20	10	40	1.21	+ 0.26	0.69	0	6	11	4	15	s.	J. L. Steele.
Moran	Allen	1,098	17	53.8	+ 7.9	76	19	24	10	38	1.86	+ 0.04	1.37	0	5	12	5	13	sw.	C. J. Norton.
Natoma	Osborne	1,834	4																	Guy Gamber.
Norton	Norton	2,284	15	45.4	+ 6.1	71	16†	20	10	38	0.71	− 0.12	0.48	T.	4	12	12	6	sw.	Sim Sleffel.
Oberlin	Decatur	2,539	26	43.8		74	20	6	10	46	0.74	+ 0.05	0.41	0	5	16	11	3	nw.	I. K. Huber.
Oketo	Marshall	1,194	5	48.8		71	18†	20	10	40	1.37		0.85	T.	4	4	17	9	nw.	J. A. Church.
Olathe	Johnson	1,032	18	50.6	+ 6.5	74	20	22	10	39	2.45	+ 1.64	1.24	0	10	7	8	15	s.	Dr. S. B. S. Wilson.
Oskaloosa	Jefferson	991									1.40		0.85	0	3					Ralph Snyder.
Ottawa	Franklin	926	19	52.0	+ 8.1	77	20	24	11	40	2.05	+ 0.51	1.02	0	8	13	6	11		W. J. Sheldon.
Phillipsburg	Phillips	1,939	22	46.7	+ 6.0	72	20	17	10	40	1.47	+ 0.78	0.94	0	7	14	9	7	se.	N. E. Bailey.
Plainville	Rooks	2,156	7																	P. D. Spellman.
Pleasanton	Linn	862	11	52.4	+ 7.2	74	18†	24	11	41	3.17	+ 1.25	2.10	0	8	9	12	9	nw.	B. F. Blaker.
Quenemo	Osage	941	1	55.8[k]		76[l]	19†	28[l]	11	37	1.73		0.46	0	6	11	7	12	sw.	R. L. Graham.
Republic	Republic	1,495	10	48.0		72	17†	17	10	44	2.22		1.83	0	5					J. W. Ambrose.
Russell	Russell	1,834	14	48.0	+ 5.6	78	11	20	10	54	0.65	− 0.38	0.40	0	3	12	5	13	sw.	Robert Brebner.
Russell Springs	Logan		3	45.4		77	11	18	10†	56	0.63		0.30	0.8	5	12	9	9	nw.	D. J. Hutto.
St. Francis	Cheyenne	3,288	5	43.6		76	2	16	24	58	0.20		0.14	0	5	11	14	5	se.	J. E. Uplinger.
Salina	Saline	1,227	29	47.4	+ 4.7	75	20	20	10	33	0.99	+ 0.08	0.40	T.	6	10	7	13	s.	Prof. A. W. Jones.
Scott	Scott	2,971	7	47.6		80	11	16	23	56	0.34		0.18	T.	3	21	3	6	s.	J. B. Loughran.
Smith Center	Smith	1,800	3	46.5		72	20	18	10	37	1.80		0.94	0	5	12	9	9	se.	W. H. Nelson.
Topeka	Shawnee	997	27	50.0	+ 8.3	74	20	25	10	35	1.31	+ 0.05	0.51	0	6	5	10	15	s.	U. S. Weather Bureau.
Tribune	Greeley	3,612	14	45.0		78	11	16	23	50	0.35	− 0.08	0.10	0.5	5	14	4	12	n.	Charles E. Cassel.
Valley Falls	Jefferson	913	14	48.8	+ 6.0	75	20	21	11	41	1.98	+ 0.34	1.40	0	8	10	6	14	se.	Miss Nettie Maxwell.
Vinland	Douglas	880	4								1.76		0.69	0	10					A. Schick.
Wakeeney	Trego	2,456	30	46.6	+ 5.5	70	16†	21	10	40	1.12	+ 0.38	0.46	0	4	14	8	8	s.	A. S. Peacock.
Wallace	Wallace	3,303	43	44.6	+ 3.6	80	11	18	10†	58	0.37	− 0.13	0.16	0	4	18	7	5	s.	J. L. Page.
Wamego	Pottawatomie	1,002	20	51.4		76	20	24	10	40	1.50	+ 0.01	0.70	0	6	10	7	13	sw.	M. L. Stone.
Missouri.																				
Amoret	Bates	850	5	52.4		79	13	25	10†	44	3.11		2.50	0	6	9[a]	9[a]	11[a]	sw.	Darby Fruit Farm.
Appleton City	St. Clair	853	24	53.3	+ 8.1	77	13	24	2†	43	1.12	− 1.22	0.82	0	4	8	8	14	s.	Mark Brown.
Arlington	Phelps	695	11								2.23	− 0.73	0.72	0	7	8[f]	4[f]	12[f]	s.	G. V. Randolph.
Arthur	Vernon	767																		Mrs. J. T. Armstrong.
Avalon	Livingston		29	50.5	+ 7.3	74	20	24	11	32	3.90	+ 1.77	1.40	0	6	14	4	12	sw.	F. G. Ashbaugh.
Bethany	Harrison	881																		W. H. Skinner.
Bolivar	Polk	1,070	26	54.6	+ 8.3	78	21	23	11	40	2.37	− 0.37	0.64	0	8	9	9	12	sw.	T. H. B. Dunnegan.
Boonville	Cooper	600	36								3.68	+ 1.25	1.10	0	9	13	0	17	sw.	C. Randecker.
Brunswick	Chariton	652	36	50.2	+ 8.5	76	19	21	11	48	3.25	+ 1.22	1.58	0	6	11	3	16	sw.	Louis Benecke.
Clinton	Henry	800	27	54.6		78	19	24	10	34	2.01	+ 0.08	1.00	0	5	10	9	11	se.	A. E. Derwent, M. D.
Columbia	Boone	784	25	51.7	+ 9.3	77	21	21	11	37	3.24	+ 0.93	1.86	0	10	6	7	17	s.	U. S. Weather Bureau.
Conception	Nodaway	982	28	48.0	+ 7.1	75	20	21	8	31	1.28	− 0.05	0.96	0	4	6	13	11	sw.	Fr. Adhelm Hess.
Crocker	Pulaski	1,300	3	50.5		76	18	21	11	34	1.12		0.40	0	3	16[e]	5[e]	4[e]	n.	Roy W. Reed.
Duncan	Webster		1	52.4		74	20	20	11	37	2.91		1.42	0	8	8	10	12	s.	C. A. Mingus.
Eldon	Miller	934	2	53.0		77	21	22	11	37	3.34		1.10	0	8	5	19	6	s.	Charles A. Kellogg.
Fayette	Howard	725	31	50.0	+ 7.2	74	18†	20	11	36	3.55	+ 1.51	1.80	0	8	12	7	11		Prof. T. B. Smith.
Fulton	Callaway	818	23	49.5[h]	+ 4.8	78	21	18	11	36	3.44	+ 1.16	2.10	0	6	7[i]	4[i]	10[i]	w.	Russell Johnston.
Glasgow	Howard	618	37								3.26	+ 1.36	0.92	0	6	14	2	14	s.	J. J. Shaughnessy.
Grant City	Worth	1,130	22	47.9	+ 6.2	75	20	22	11	37	3.05	+ 1.64	1.38	0	3	15	5	10	s.	W. H. Campbell.
Harrisonville	Cass	912	41	50.6	+ 8.6	75	20	24	11	41	3.75	+ 1.73	1.50	0	8	6	3	21	sw.	A. J. Sharp.
Hermann	Gasconade	482	40								3.50	+ 0.58	1.56	0	9	9	2	19	e.	C. T. Maushund.
Houston	Texas	1,280	22	51.2	+ 5.5	75	13	21	1†	39	2.20	− 0.34	0.55	0	6	7	10	13	s.	J. W. Logue.
Jefferson City	Cole	628	33	49.2	+ 5.1	78	21	19	11†	56	3.31	+ 1.05	1.20	0	7	15	0	15	s.	Miss Emma Swift.
Kansas City	Jackson	963	26	51.5	+10.0	74	19	28	10	31	1.80	− 0.05	0.81	0	7	7	9	14	s.	U. S. Weather Bureau.
Keytesville	Chariton		1								3.60		2.00	0	5					J. T. Dewey, M. D.
Kidder	Caldwell	1,017	23	50.2	+ 8.8	74	19	24	9	32	1.52	− 0.19	1.02	0	5	13	6	11	sw.	J. F. Sharp.
Lamonte	Pettis	863	26	51.7		75	18	20	11	41	4.82	+ 2.88	1.38	0	7	4	14	12	s.	J. Ed. Hall.
Lebanon	Laclede	1,265	0	52.4	+ 6.4	75	21	21	11	35	4.06	+ 1.52	1.65	0	5	10	8	12	w.	M. W. Serl.
Lexington	Lafayette	813	31	51.0	+ 7.5	75	19†	24	11	35	2.14	+ 0.21	1.05	0	8	17	0	13	s.	J. W. Keithley.
Liberty	Clay	864	26	51.8	+ 8.9	75	20	26	11	34	2.34	+ 0.62	1.40	0	5	8	10	12	s.	W. C. Wilmott.
Lockwood	Dade	1,088	18	54.8		76	21	25	10	34	1.76	− 0.39	0.73	0	5	14	5	11	sw.	C. S. Crow.
Marshall	Saline	779	24	51.1	+ 8.4	75	20	19	11	40	4.02	+ 1.94	1.20	T.	7	13[a]	5[a]	11[a]	sw.	Prof. W. H. Black.
Maryville	Nodaway	1,160	24	46.7	+ 8.1	74	20	21	1	44	2.06	+ 0.64	1.07	0	5	15	6	9	s.	J. R. Brink.
Mount Vernon	Lawrence	1,480	36	51.6[g]	+ 4.6			24	11	44	3.74	+ 0.80	1.60	0	5	9[g]	6[g]	8[g]	se.	J. R. White & Son.
Nevada	Vernon	860	20								2.08	+ 0.15	1.28	0	7	8[a]	18[a]	3[a]	sw.	C. Jewell.
Oregon	Holt	1,113	59	49.0	+ 8.4	73	20	24	9†	27	2.54	+ 0.83	1.00	0	6	12	7	11	sw.	Tom Curry.
Rolla	Phelps	1,139	33	52.7	+ 9.5	76	21	20	10	36	1.75	− 0.79	0.50	0	6	11	9	10	s.	Prof. Elmo G. Harris.
St. Catherine	Linn		1	50.0		73	20	20	11	33	1.43		0.60	0	9	8	11	11	sw.	L. D. Baker.
St. Charles	St. Charles	614	36	52.0	+ 7.3	79	21	22	11	36	4.21	+ 1.36	2.21	0	7	9	7	14	sw.	L. C. Saeger.
St. Joseph	Buchanan	967	42	50.0		74	20	26	10	31	1.46	− 0.37	1.03	T.	7	7	10	13	s.	U. S. Weather Bureau.
St. Louis (1)	St. Louis City	567	43	52.4	+ 8.6	75	21	29	10	33	3.12	+ 0.24	1.64	0	10	9	5	16	s.	Do.
St. Louis (2)	do	578	2	52.9		76	21	26	11	32	3.28		1.50	0	12	6	8	16	se.	St. Louis University.
Sublett	Adair	1,000																		Lewis Spriggs.
Tarkio	Atchison		2					19	1		1.41		1.10	0	2	15	8	7	s.	Prof. M. H. Rees.
Trenton	Grundy	812	19	48.8	+ 7.1	72	19†	24	11	26	2.21	+ 0.54	0.92	0	7	9	6	15	s.	W. H. Estes.
Unionville	Putnam	1,072	21	46.7	+ 7.4	74	20	17	11	46	0.25	− 1.57	0.10	0	5	11	6	13	s.	Geo. W. Davis.
Warrensburg	Johnson	883	35	52.7	+ 8.3	75	18†	25	11	37	3.97	+ 2.22	1.87	0	8	6	10	14	sw.	A. F. Smithson.
Warrenton	Warren	865	24	49.0	+ 6.3	76	21	21	11†	53	3.85	+ 1.16	1.38	0	9	8	5	17	s.	Prof. J. H. Frick.
Warsaw	Benton	700	10	55.6	+ 8.5	78	21	20	11	45	3.31	+ 0.76	1.56	0	7	8	16	6	sw.	J. R. Smith, M. D.
Wheatland	Hickory	930	22								2.55	− 0.08	1.40	0	7	14	10	6	s.	Mrs. S. A. Jackson.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ All temperature normals for Montana used in this table have been reduced to the 33-year period.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 6, Missouri Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wyoming.																																
Arapahoe	Bighorn														.15														.30			0.45
Basin	do						.17																									0.17
Big Creek Station	North Platte				.38																.50										T.	0.88
Boyd	Cheyenne						.25	.10							.15	.01													T.			0.51
Burns	South Platte		.09										.10	.05							.05	.05							.05			0.39
Casper	North Platte		.23												.23														.02			0.48
Centennial	do		T.	.45			.12	.10					T.	.03	T.	.03			T.	T.		.03				T.			.02			0.78
Cheyenne	South Platte		.01	.06			.04							.08								.05							.13			0.37
Chugwater	North Platte																															0.00
Clark	Yellowstone		.09	T.			.10					T.									T.					T.						0.19
Cody	Bighorn		.04				.02																									0.06
Crandall Creek	Yellowstone																															
Dome Lake	Tongue		.50				.60					.10	.20		.50						.10	.10							.40			2.50
Douglas	North Platte		.06	.11			T.								.06														T.			0.23
Dubois	Bighorn		.30				.18					.02																			T.	0.50
Estons Ranch	Tongue		.18																			.10							.10			0.38
Echeta	Powder																															
Elk Mountain	North Platte		*	.47			.09					.04		.24								*	.34						.04			1.22
Encampment	do			.23			.08					.02	.05	.03	.03	T.			T.		T.	.17	.03			T.			.23			0.87
Ervay	Powder		.04												.06							T.							.15			0.25
Fort Laramie	North Platte			.40										T.									T.									0.40
Foxpark	do			.50			.30	.20																.20								1.20
Germania	Bighorn		.06				.18																									0.24
Gillette	Powder																															
Horse Creek	Bighorn																															
Hunters Station	Powder		.12				.07					T.	T																.09			0.28
Hyattville	Bighorn																												.20			0.20
Jireh	Niobrara																															
Kinnear	Bighorn		T.																												T.	T.
Kirtley	Niobrara			.03																												0.03
Kirwin	Bighorn		.35	.18			.92	.09			.18		.09		.04				T.		.18	.09										2.12
Knowles	Cheyenne		.10												.02														T.			0.12
Lagrange	North Platte																															
Lander	Bighorn		.30				T.								.04														.08		.09	0.51
Laramie	North Platte	.20					T.						.01	T.								.50						.05				0.76
Leo	do																															
Lolabama	Yellowstone		.15																													0.15
Lovell	Bighorn																															
Lusk	Niobrara													T.																		T.
Manville	do		.20					.10							.30																	0.60
Moorcroft	Cheyenne			T.			T.	T.								.05													T.			0.05
Moore	North Platte			.59										16								.01								.04		0.80
Newcastle	Cheyenne						.35	T.							.15																	0.50
Pathfinder	North Platte		.10	.11										T.	.24														T.			0.45
Pinebluff	South Platte					T.																								.03	.17	0.20
Pine Ridge	Cheyenne			T.			T.	T.	T.			.02			T.														T.			0.02
Powell	Bighorn																															0.00
Rawlins	North Platte		.21	.32			.02					T.	.06	.09	.06							.01	.24						.02			1.03
Rock River	do		T.	.50			T.	T.																								0.50
Rockypoint	Powder		.08				T.	T.							T.														T.			0.08
Saratoga	North Platte	.30	.30																			.15										0.75
Seven-mile Creek	do																															
Sheridan	Tongue		.10				.08						T.																.04			0.22
Shoshone Dam	Bighorn		.02				.02						T.																		.04	0.08
South Pass City	North Platte		.03	T.			.16					T.	.23	.07	.21					T.	T.	.03				T.						0.73
Sundance	Cheyenne																															
Thermopolis	Bighorn		.24	.17			.04																						.17			0.62
Ulm	Tongue		.05										T.																T.			0.05
Upton	Cheyenne		T.				.17								.13																	0.30
Verona	Tongue		.06																										.06		.05	0.17
Wheatland	North Platte			.44										10																		0.54
Wiants Ranch	do		.08				.05							.15	.04						.02	.22							.22			0.78
Woodrock	Tongue																															
Worland	Bighorn			.07			.07								.05							.03							.02			0.24
Wyncote	North Platte		T.	.23										.07									.05	T.								0.35
Yellowstone Park	Yellowstone	.06	.30			.13	.20					.53	T.						T.	.03	.11	.05	.04			.03	T.	.04	.01	.01	T.	1.54
Fountain	Madison											.20							.10	.20	.30	.10	.10			.30		.10				1.40
Gallatin	Gallatin		.30			.20	.30												.10	.10	.30	.30		.20								1.80
Grand Canyon	Yellowstone	T.	.43			.05						.10							.02	.50	.30	.20	.20			.15	.10	.15			.05	2.25
Lake Yellowstone	do		.29			.16	.17					.25	.08						.10	.22	.17	.10	.21	.03		.04	.06	.03	.07			1.98
Norris	Madison		.25				.25					.70								.45	.15	.30	.38									2.48
Riverside	do			.30	.20							.20							.70	.30	.40	.20				.20	.40					2.90
Soda Butte	Yellowstone		T.				.30					.40								.24												0.94
Sylvan Pass	Bighorn	.04	.35				.30					.70	.10	.05						.30	.15		.05			.12	.07	.05	.05			2.33
Thumb	Yellowstone		.23			.08													.52	.60	.60	.45	.45			.30		.19				3.42
Tower Falls	do		.50			T.	.15					.15							T.	T.	.20	.15									T.	1.15
Up. Geyser Basin	Madison	.20	.30	.10														.10	.20	.30		.10	.05	.05	.15	.10	.25	.10				2.00
Montana.																																
Absarokee	Yellowstone												.73																			0.73
Adel	Missouri		.20				.03				T.	.11							T.	T.	.20	.10						T.				0.64
Agricultural College	Gallatin		.09				.04													.09	.17	.08							.11		.06	1.24
Augusta	Missouri											T.									.24											0.24
Bald Butte	do		.68	.01			.16				.02	.21							.05		.09	.01	.02	.05		T.		T.	T.		T.	1.30
Bigtimber	Yellowstone		.27																			.08										0.35
Billings	do		.20				T.						.06									T.										0.26
Blackleaf	Missouri		.04									.08									T.	.04	T.									0.16
Boulder Nursery	Jefferson																															
Bowen	do		.52			.08	.15				.01	.26								.01	.09	.11						T.				1.23
Box Elder	Milk		.15			T.	.01	T.			T.	.07	.04	.01	.02		T.				T.	.31										0.61
Brenner	Jefferson		.39				.26					.11							T.		.04	.05				.02		.01				0.88
Bridger	Yellowstone		.15																													0.15
Broadview	do																															
Browning	Marias										.04		.12					.04		.04	.08			.04								0.36
Busby	Yellowstone		.03																										.01			0.04
Busteed	do		.28				.02					T.	T.								.01	.01							T.			0.32
Cameron	Madison		.30				.04					T.									T.	.15				.02		T.	.10	T.	.20	0.81
Canyon Ferry	Missouri																															
Cascade	do		.79									.28							T.		.31	T.										1.38
Chester	Marias	.01										.10	.16								.16											0.43

TABLE 2.—*Daily precipitation for November, 1913. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Montana—Contd.																																
Chinook	Milk		.15				.02	.48				.09	.03		T.	T.			.01			.07									0.85
Clydepark	Yellowstone		.26			T.						.12							.03		.03	T.							T.		.03	0.47
Conrad	Marias											.22										.04										0.26
Copper	Missouri		.50									.20									.19	.02						.01				1.13
Crow Agency	Bighorn		.20	.37									.07																			0.64
Culbertson	Missouri		.15				.03															T.										0.18
Cut Bank	Marias												.10																			0.10
Denton	Missouri		.33									.20								T.	.13	.03										0.69
Dillon	Jefferson		.42				.09	T.													.15	.02						T.				0.68
Dunkirk	Marias											.23	.03																			0.26
Ekalaka	L. Missouri		.03						.16														T.									0.19
Fallon	Yellowstone		.25				T.																									0.25
Findon	Missouri		.05				.03					.08							.01		.33	.03										0.53
Flathead Creek	Yellowstone																															
Flatwillow	Missouri		.21									.05							.01		.26	T.							.03			0.56
Forsyth	Yellowstone		1.09																													1.09
Fort Shaw	Missouri		T.									.11									.29	06							.04			0.46
Foster	Bighorn		.17										.09																			0.30
Garneill	Missouri											.10							.05		.10	*	.15									0.40
Geyser	do																															
Glacier Park	Marias		.06			T.	.11				.01	.06	.14						.01			.08			.07							0.54
Glasgow	Milk																															
Glendive	Yellowstone						.10					T.	T.																			0.10
Goldbutte	Marias	.14				.02	T.	T.											T.													0.16
Graham	Powder		.08																													0.08
Great Falls	Missouri	.03	.14									.19							T.		.21	.03										0.60
Harlowton	do		15																		.16	T.										0.31
Havre	Milk	.11	.09				.18	.07				.07	.18						.01		.06	.06										0.83
Hebgen Dam	Madison	T.	.35				.02												.20		.20	.16	.03			.02	T.	.25				1.23
Helena	Missouri	.15	.23				.01					.13							T.		T.							T.				0.52
Highwood	do		.20										.20								.34	.10										0.84
Huntley	Yellowstone		.35										.05																			0.40
Knobles Ranch	Milk		.04				T.	T.				.06	.01						.01													0.12
Lewistown	Missouri		.36										.05								T.	.28										0.69
Lima	Jefferson		.35				.07														T.								.04	T.	.12	0.58
Lonetree	Missouri																															
Lothair	Marias											.30	.10							T.		.10										0.50
Lytle	Missouri		.05				T.					.10							T.			.03										0.18
Malta	Milk		.05				.02	.01				.11	.05								.06											0.30
Medicine Lake	Missouri		.03			.10						.10										.20										0.43
Melstone	do		30																													0.30
Mildred	Yellowstone		12																													0.12
Miles City	do		.02					.02												T.												0.04
Norris	Madison		.03																		.26								.04		.01	0.34
Pinegrove	Missouri		.30									.12									.40								.01			0.83
Plevna	Yellowstone		.05				.02	.19															.03									0.29
Poplar	Missouri		.22				T.					T.	T.									T.										0.22
Red Lodge	Yellowstone		.60																		T.											0.60
Renova	Jefferson		.51				T.					.04									.23	.06										0.84
Ryegate	Missouri		.40									.03									.12											0.55
Savage	Yellowstone		.15										T.																			0.15
Shelby	Marias											.20	.15																			0.35
Sidney	Yellowstone																															
Springbrook	Missouri		.30					.10				T.	T.	T.					T.			.02										0.42
Stacey	Tongue		.10					T.					T.									T.							T.			0.10
Sunlit Farm	Milk		T.				.06					.05	.01																			0.12
Sun River Canyon	Missouri													12												32	T.					0.44
Three Forks	Madison		.47									.39									.31	.09										1.26
Utica	Missouri		.65									.18									.77		T.									1.60
Valentine	do		.23									.12	T.						T.			.39										0.74
Valier	Marias		T.									.15	T.								.12											0.27
Wall Rock Mountain	Missouri		.12									.17	.08								.15	.05				.01	.04	.03				0.65
Wheaton	do		.19									.03											.12									0.34
Wh. Sulph. Springs	do		.16									.11									.15											0.42
Wilder	do																															
Wolf Creek	do		.51	.10	.09						.24										.06	.02						T.				1.02
North Dakota																																
Aplin	Knife		T.				T.							T.		T.			T.			.05										0.05
Ashley	do														T.								.20						T.			0.20
Beach	Little Missouri		.25				.08	.01																								0.34
Belfield	Heart														T.																	T.
Berthold Agency	Missouri		.08				T.						T.						.01													0.09
Bismarck	do		.01					T.					.02						T.				.13									0.16
Buford	do		.12				.02						.05							.04		.05										0.28
Carson	Heart		T.					.20					T.										.20									0.40
Dickinson	do		.05					.30					T.						T.				.08									0.43
Edgeley	James															.13							.15									0.28
Epping	Missouri		T.																	.08												0.08
Fullerton	James								.32														.21									0.53
Garrison	Missouri		.05					T.											.54													0.59
Haley	Grand																															
Hettinger	do																															
Howard (near)	Missouri		.01				.01												T.			.20										0.22
Jamestown‖	James													.15		.10							.05	.30								0.60
Krem	Knife																															
Lamoine	Missouri												T.	.20					T.													0.20
McHenry (near)	James																		T.			T.	.02						.03			0.05
Marmarth (near)	Little Missouri		.07					.07										T.					.02									0.16
Marstonmoor	James												.10					T.				T.	.20						T.			0.30
Medora	Little Missouri																															
Melville	James																		T.				.20									0.20
Mott	Cannon Ball		T.					.02															.21									0.23
Napoleon‖	Missouri							T.						.05		T.							.50									0.55
New England	Cannon Ball																						.20									0.20
New Rockford	James																															
New Salem	Heart		.01											.03					T.				.20									0.24
Orange	Cannon Ball												T.										.20									0.20
Ranger	Little Missouri																															
Ronda	Knife		.07										.02						.01										.01			0.11
Steele	Missouri							T.	T.					.01	T.	T.				T.			.10						T.			0.11

TABLE 2.—*Daily precipitation for November, 1913. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
North Dakota—Con.																																
Turtle Lake	Missouri		.07					.02											.08				.01									0.18
Washburn	....do		T.											T.									.20								0.20
Williston	....do		.07				.01					.04	T.	T.					T.			.03									0.15
South Dakota.																																
Aberdeen‖	James															.15	.22						.05							.25		0.67
Academy	Missouri							.30							.07	.04															.01	0.42
Alexandria	James																															
Ardmore	Cheyenne			.05							.10																					0.15
Armour	Missouri																															
Bellefourche	Cheyenne														.24																	0.24
Blunt	Missouri														.24							T.										0.24
Britton	James															.08							.05									0.13
Brookings	Big Sioux							.13								.08						.52	.08									0.81
Bryant	....do							.05								.07					T.	.15								T.		0.27
Camp Crook	Little Missouri		T.					.12																								0.12
Canton	Big Sioux															.09			T.			.87									T.	0.96
Castlewood	....do						T.	.09						T.		.08				T.	T.	.61								T.		0.78
Centerville	Missouri							.32						T.		.18			T.			.58					T.				.02	1.10
Chamberlain	....do																															
Clark	James						.05	.05						.20		.20																0.50
Cottonwood	Missouri						.08								.06							T.										0.14
Custer	Cheyenne														.10																	0.10
Daviston	Owl														.02																	0.02
Deadwood	Cheyenne						T.								.20														T.			0.20
Deerfield	....do			T.			.22	.01							.10																	0.33
De Smet	James							T.								T.						.36						T.				0.36
Dowling	Cheyenne							T.							.30																	0.30
Dumont	....do						.06	.09							T.								T.									0.15
Eales	Missouri							.05							.09	.04							.05									0.23
Elk Mountain	Cheyenne																															
Ellingson	Grand		T.					.12															.02									0.14
Eureka	Missouri														T.	.06							.02									0.08
Fairfax	....do							.35							T.	.10						.30	.05							T.		0.80
Faith	Cheyenne							T.					T.		.49	.10							.07						.02			0.68
Faulkton	James							T.							.20								.15									0.35
Forestburg	....do							.09							.15					T.	T.	.08										0.32
Fort Meade	Cheyenne																															
Goldfield	....do							.03							.23																	0.26
Greenmont	....do		.20					.10							.10														.12			0.52
Greenwood	Missouri							.40							.20							.25	.05									0.90
Hardingrove	Cheyenne														.07																	0.07
Hardy Ranger Sta.	....do		T.				.18	.12							.07														.03			0.40
Harveys Ranch	....do									T.				.10													T.					0.10
Hermosa	....do						.11								.03																T.	0.14
Highmore	Missouri							T.							.03																	0.03
Hopewell	Cheyenne							.06							.10							T.										0.16
Hot Springs	....do					.30	.20								.20																	0.70
Howard	Missouri							.23								.07					T.	.45	.05							T.		0.80
Howell	James			T.				.02							.05	.06											.01		T.			0.14
Huron	....do		T.					.05					T.		.09																	0.14
Ipswich	....do							T.							T.	.18							.03									0.21
Kadoka	White						.22								.09																	0.31
Kennebec	Missouri							.15							.10																	0.25
Kimball	....do														.10																T.	0.10
La Delle	James							T.	T.						T.	.18				T.	T.											0.18
Lead	Cheyenne		.03				.02	.02							.11														.01			0.19
Marion	Missouri							.35								.35						.40										1.10
Marston	....do							.03							.05	.02																0.10
Meadow	Grand							T.					T.		.15	T.																0.15
Mellette	James			T.				.02							T.	.21							.18									0.41
Menno	....do						.15								.20							.45									.10	0.90
Milbank ‖	Minnesota							T.	T.					.07		.15						.95					T.	T.				1.17
Mitchell ‖	James						.43	.05							.21							.22	.05									0.96
Mobridge	Missouri															.15						.05										0.20
Murdo	White						T.								T.																	T.
Oelrichs	Cheyenne						T.								.10																	0.10
Onaka	James																															
Onida	Missouri														.05								.05									0.10
Orman	Cheyenne							.01					.23																			0.24
Ottumwa	Missouri														.06																	0.06
Parkston	James					.07	.15	T.							.37							.42	.20									1.21
Pearl Creek	....do						T.	.20																							.05	0.25
Pierre	Missouri						.03	.04					T.		.04								T.								T.	0.11
Pine Ridge	White						.03																								T.	0.03
Plankinton	James							.58							.31								T.									0.89
Pollock ‖	Missouri						.05								.11							.10										0.26
Rapid City	Cheyenne		T.				.10								.03																	0.13
Redfield ‖	James							.05	.20							.20	.15															0.60
Rochford	Cheyenne					T.	.15								.07																	0.22
Rosebud	White							.75						T.	T.																	0.75
Roslyn	Big Sioux															.12							.05									0.17
Sioux Falls ‖	....do							.10								.22						.61										0.93
Sorum	Owl						T.					T.			T.																	T.
Spearfish	Cheyenne		T.	T.											.08															T.		0.08
Stephan	Missouri							T.						T.		.12															T.	0.12
Tama	Cheyenne																															
Timber Lake	Grand														.30								.18									0.48
Tyndall	Missouri							.20							T.	.12						.31										0.63
Vale	Cheyenne		T.												.14															T.		0.14
Vermilion	Missouri							.10								.08						.40									T.	0.58
Waters Ranch	Cheyenne		.01	.11											.08															T.		0.20
Watertown ‖	Big Sioux						T.	T.	T.							.07	T.			T.	T.	.20								T.		0.27
Wentworth	....do							.24								.06						.49	.11									0.90
White Lake	Missouri					.25											20															0.45
Winner	White						.40	.07					T.		.04							T.										0.51
Wood	....do							.34							.03																	0.37
Yankton	Missouri						.04	.21							.10	.03				.01	T.		.31									.10	0.80
Minnesota.																																
Pipestone	Big Sioux						.19	.35	.02							.05						.35	.10									1.06

TABLE 2.—*Daily precipitation for November, 1913. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Colorado.																																
Arriba	Republican		.30	.30											T.											T.					T.	0.60
Auldhurst	South Platte			.26				T.																					.04	.13		0.43
Bennett (near)	do																															
Boulder	do																															0.00
Burlington	Republican														.02			T.				.02							T.			0.04
Cassells	South Platte			.45				.10							.02															.10		0.67
Castle Rock	do			.27																										.30		0.57
Cheesman	do			.20																										.10		0.30
Cheyenne Wells	Smoky Hill			T.	.01										T.			T.	T.			.20							T.	T.		0.21
Denver	South Platte		.06	.17																									.15			0.38
Edgewater	do			.25																									.37			0.62
Estes Pk. Fish Hatch	do			.12			T.	.40					.03	.22															.14			0.91
Fort Collins	do			.04	T.		T.																						.13			0.17
Fort Lupton (near)	do			.13			.09								T.															.16		0.38
Fort Morgan	do			.40																												0.40
Frances	do			.25	.02		.02	.51						.10															.17	.01		1.08
Frys Ranch	do			.14			.05	.10					.05	.32	.10								0.7						.13			0.96
Georgetown ‖	do		.17	.03			.35	T.						T.															.11			0.66
Greeley	do																												T.			T.
Grover (near)	do																															
Hartsel	do		.01	.09			.02																						.07			0.19
Hawthorne	do			.38				.04																						.48		0.90
Holyoke (near)	Republican								T.										T.												T.	T.
Idaho Springs	South Platte			.10				.19																					.04	.16		0.51
Julesburg	do																															
Kersey	do																															0.00
Laporte	do			.02																										.29		0.31
Le Roy (near)	Republican												T.																		T.	T.
Longmont ‖	South Platte		.03	.03			.07							T.															.66		.14	0.93
Longs Peak (near)	do																															
Merino	do			.30																											.15	0.45
Moraine	do			T.																												T.
Platte Canon	do			.25																										.22		0.47
St. Cloud	do			.18			.08	T.						.15															.10			0.51
Sedgwick	do																															
Silver Lake	do																															
Spicer (near)	North Platte						.32						T.	.65							T.	T.										0.97
Sterling	South Platte			T.											T.																	T.
Waterdale	do																															
Wray	Republican						T.														.05								T.		.04	0.09
Yuma	do							T.							T.																T.	T.
Nebraska.																																
Ainsworth	Niobrara							.09							.05							.42	T.								.16	0.72
Albion	Loup			T.				T.						T.	T.							.38			.15						.75	1.28
Alliance	North Platte														.10								T.									0.10
Alma	Republican															.05						.17						.03	.02	.06	.45	0.78
Arcadia	Loup																				.42								T.	T.	.25	0.67
Arden ‖	do							.03						.18					T.		.06					T.	.01	T.		T.	.19	0.47
Ashland	Platte							.06							T.				T.			.32					.05	.03			.30	.89	1.65
Ashton	Loup																					.12	.03								.41	0.56
Atkinson ‖	Elkhorn							.10	T.							.06					.32		T.								T.	0.48
Auburn	Missouri							.08							T.	T.		.02				.22				.03				.16	.70	1.21
Aurora	Blue																					.25							.34		1.06	1.65
Beatrice ‖	do																					.21								.34	.28	0.83
Beaver City	Republican														.09			T.				.08							.06		.36	0.59
Bellevue	Missouri							.04							T.				T.			.14				.10	.04			.70	.58	1.60
Benkelman	Republican																															
Bertrand ‖	do																					.25									.19	0.44
Blair	Missouri							.05							T.				T.			.10				.06			.04	.06	.71	1.02
Blake	Loup														T.							.33								.14	.08	0.55
Bloomfield	Missouri							.30								.05						.25									T.	0.60
Bradshaw ‖	Blue																					.25							.50		1.00	1.75
Brewster	Loup							T.														.20									.07	0.27
Bridgeport	North Platte													T.								T.									T.	T.
Broken Bow ‖	Loup													T.							.96	.03								.21	.07	1.27
Bruning	Blue														T.			T.	T.			.37				.03	.01		T.		1.15	1.56
Burge	Niobrara																														T.	T.
Burwell	Loup														.03						.31										.16	0.50
Butte	Niobrara							.28								.05						.15									T.	0.48
Cairo	Platte							T.													.34					T.	T.	T.	.20	.75	1.29
Callaway	Loup																					1.25									.79	2.04
Cambridge	Republican							T.							T.						T.	.42				T.		T.	T.		.26	0.68
Columbus ‖	Loup							T.																		T.				.28	.67	0.95
Crete	Blue							.04														.64							.02	.61	1.08	2.39
Culbertson ‖	Republican															T.						.47							T.		.03	0.50
Curly	North Platte																															
Curtis	Republican			T.				T.	T.						T.				T.	T.		.12							T.		.02	0.14
Dalton ‖	North Platte																															
David City	Blue							.02						T.				.03	T.			.30									.10	.89	1.34
Du Bois	Missouri							T.	T.							T.		T.				.27				.04					.11	.80	1.22
Dumas	Loup														T.							.26										.11	0.37
Elm Creek ‖	Platte																	.04			.40										.25	0.69
Elsie ‖	Republican												.05																			.01	0.06
Ericson (near)	Loup			T.				T.														.55					.02			T.	T.	0.57
Ewing ‖	Elkhorn							.14							.10						T.	.30				T.	T.	T.			.13	0.67
Exeter	Blue																		T.	T.	T.	.50				T.	T.	T.	T.	T.	1.75	2.25
Fairbury ‖	do																	T.	T.		.71				T.	T.			.12	1.11	.10	2.04
Fairmont ‖	do																					.52								.18	1.29	1.99
Falls City	Missouri							.05							T.			T.	.07		T.	.31				.05				1.98	1.02	3.48
Fort Robinson ‖	White			.07											.10	T.																0.17
Franklin ‖	Republican														.01						.40					T.		T.	.04	.85	T.	1.30
Fremont	Platte							T.														.44				.04	T.			.24		0.72
Fullerton	Loup																															
Geneva	Blue														T.			T.	.02	T.		.55				T.			T.		1.26	1.83
Genoa	Loup							T.	T.					T.	.02			T.	.02		.22					.03	T.	T.	T.	.08	.98	1.35
Gordon	Niobrara																															
Gosper	Republican													T.	T.	T.					.59					T.		T.	T.		.25	0.84
Gothenburg	Platte													.04		T.						.65	.02						.02		.30	1.03
Grand Island ‖	do																		T.			.30						.02		.30	.90	1.52

TABLE 2.—*Daily precipitation for* ***November****, 1913. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																										Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Nebraska—Contd.																																
Grant	Republican																				T.											T.
Greeley	Loup					.05									.01	.02					.38					T.					.25	0.71
Guide Rock	Republican																	T.				.32					T.		.22		1.80	2.34
Haigler	do																															0.00
Halsey	Loup							T.														.01	T.								.01	0.02
Hartington	Missouri							.08							T.	.05				22						T.					.08	0.43
Hastings ‖	Blue																	T.	T.			.19				T.				.72	1.25	2.16
Hayes Center	Republican															T.						.26								.10	.76	1.12
Hay Springs	White						T.	T.							T.							T.									T.	T.
Hebron	Blue																					.48				T.	T.			T.	1.04	1.52
Hemingford ‖	Niobrara														.11																	0.11
Hendley ‖	Republican																					.50								.26	.09	0.85
Hershey ‖	South Platte														.08							.02								T.	T.	0.10
Hillside	North Platte						T.								.01							.03	.04			T.			.01		.01	0.10
Holdrege ‖	Republican															T.		T.				.22				T.					.10	0.32
Hooper	Elkhorn							.32						.02																	.58	0.92
Hull (near)	North Platte																															
Imperial	Republican			T.										.10	T.						.10										.12	0.32
Kearney	Platte																					.19				T.			T.	.04	.35	0.58
Kimball ‖	South Platte		T.																		T.											T.
Kirkwood	Niobrara						.18	.06													.20	.02										0.46
Kowanda ‖	North Platte																						.08									0.08
Lexington	Platte																T.	T.				.33						.04			.51	0.88
Lincoln	do					T.	T.	.04							T.						.31	.08				.02	T.	T.	.39	.23	1.36	2.43
Lodgepole	South Platte																						.07									0.07
Loup City	Loup																			22									.07		.30	0.59
Loyal ‖	do														T.	.04					.16									.01	T.	0.21
Lynch	Missouri							.19								.12										T.						0.31
McCook ‖	Republican		*												T.			T.				.28							T.		.15	0.43
McCool Junction ‖	Blue							T.										T.	T.		.25								.64	1.13	.18	2.20
Madison	Elkhorn							T.				T.										.55				.05					.55	1.15
Marquette	Blue							T.														.26					.01		T.	.39	.88	1.54
Mary	Loup							T.						T.	.05	T.			.15	.05								T.			T.	0.25
Mason City ‖	do																				.45	.10									.10	0.65
Minatare	North Platte																		.03													0.03
Minden	Blue													T.					.01		.26							.02	.07	.01	.54	0.91
Mitchell	North Platte			.01										.07	.08																	0.16
Nebraska City	Missouri							T.													.31					.14				.15	1.32	1.92
Nelson	Blue																					.60							.20	1.55		2.35
Norfolk	Elkhorn							T.						T.	T.			T.		.40		.02				.06	T.	T.	T.		.57	1.05
North Loup	Loup														T.							.40									.31	0.71
North Platte	Platte			T.			T.								.01						T.	.01	.02						T.		.10	0.14
Oakdale	Elkhorn							.07							.05				T.		.21					T.					.28	0.61
Omaha	Missouri							.04							T.	T.		T.	T.		.18	.06				.07	.01		.01	.23	.55	1.15
O'Neill ‖	Elkhorn						T.	.02	T.						T.	T.						.51									T.	0.53
Ord	Loup																					.36	.03			.04					.26	0.69
Orleans ‖	Republican	.17									.10											.23							.04		.50	1.04
Osceola	Blue																					.60								.19	.83	1.62
Oshkosh	North Platte														T.								.06			T.						0.06
Palisade	Republican																					.18		.07								0.25
Pawnee City	Missouri																	T.				.25									.86	1.11
Paxton	South Platte																					T.										T.
Plymouth ‖	Blue																		.02			.60								*	1.30	1.92
Purdum	Loup							T.							.03							.06									.01	0.10
Ravenna	do																		.06			.23	T.			T.		T.	T.	.09	.42	0.80
Red Cloud	Republican													T.	T.	T.		T.				.32							T.	.37	1.73	2.42
St. Libory	Platte																					.22								.18	.82	1.22
St. Paul	Loup																		.03			.19				T.		T.	T.	.12	.56	0.90
Santee	Missouri																															
Schuyler	Platte							T.							T.			T.				.27				.06				.13	.69	1.15
Scottsbluff	North Platte			.02			T.							T.	.03							.08										0.13
Seward	Blue							.02										T.	T.			.50				T.				.87	1.39
Sidney	South Platte																						.10									.10
Springfield	Platte								.10					T.		T.		T.			20					T.		.04	.06	.10	.50	1.00
Springview	Niobrara																															
Stanton	Elkhorn													T.	T.							.40	T.								.50	0.90
Stapleton ‖	Loup																															
Stratton ‖	Republican																														.10	0.10
Superior ‖	do																					.50									1.25	1.75
Syracuse	Missouri							.11										T.			.18					.05		T.	T.	.14	1.10	1.58
Table Rock	do							.08														.22					.06			.07	1.10	1.53
Tecumseh	do								T.													.25		T.	T.		T.	T.	.02	.22	.63	1.12
Tekamah	do														T.				T.		.30					.02				.05	.50	0.87
University Farm	Platte							.05														.47				.04	.01			.83	1.00	2.40
Upland ‖	Republican																					.49				T.		T.			.80	1.29
Valentine	Niobrara						23	.08							.02								.01								.11	0.45
Wahoo	Platte							.20													.65									.38	1.10	2.33
Wakefield	Elkhorn							.14							.07							.23	.05			.03					.25	0.77
Walthill	Missouri							.05							T.				T.			.32				.08					.32	0.77
Watertown	Platte																					.58									.24	0.82
Wauneta	Republican																					.15								.15		0.30
Weeping Water	Missouri							.09										T.				.17				.06	T.	T.	T.	.31	1.53	2.16
Westpoint	Elkhorn													T.					T.				.65			.10				.24	.50	1.49
Wisner	do																						.72	.03		.10					.56	1.41
York	Blue							T.						T.				T.	T.			.22								.29	1.22	1.73
Iowa.																																
Afton	Grand							.15							T.	.05		T.			.03	.23					.11			1.02	.85	2.44
Allerton	Chariton							.08							.10	.11		T.	.02			.11					.02		.08		.88	1.40
Alton	Floyd							.16								.10		T.	T.	.02	.01	.10				T.			.02	T.	T.	0.41
Atlantic	Nishnabotna							.10						T.	T.			.01	.01			.31				.10	.05	.01	.01	.06	.62	1.28
Audubon	do							.20						.20				.12	.01	T.					.06	.33	.06	.01	T.	.01	.36	1.36
Bedford	Missouri							.08							T.			T.				.21				.06	.03		T.	1.03	.75	2.16
Centerville	Chariton							.05	.01							.10				T.							T.				1.10	1.26
Chariton	do							T.																			T.	T.	T.	2.40	.44	2.84
Clarinda ‖	Nodaway							.10											.02			.21				.04	.05	T.		.40	.35	1.17
Corning	do							.10							T.			T.				.44					.11			.95	1.89	3.49
Corydon	Chariton							.11						T.	.05			T.	.02	.06		.04				T.	.03		.09	.03	.83	1.26
Council Bluffs	Missouri																															
Creston ‖	do								.15							.01		T.	T.	.03		.17					.05	T.	T.	.61	.09	1.11

TABLE 2.—*Daily precipitation for November, 1913. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																										Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Iowa—Continued.																																
Cumberland	Nodaway														T.							.60								.27		0.87
Denison	Missouri														T.	.05			.03			.09				.09	.02		.06	.22	.32	0.88
Elliott	Nishnabotna								T.									T.	T.			.03				T.	.60		T.	T.	.75	1.38
Greenfield	Nodaway							.15							T.			T.				.15				.05	.10			.30	1.00	1.75
Harlan	Nishnabotna							.10						T.	T.							.13				.07	.04		.02	.14	.38	0.88
Inwood	Big Sioux							.40								.20			T.	T.	.02	.98								.01	.03	1.64
Lake Park	Little Sioux							T.								.20											T.	T.	T.	T.	T.	0.20
Lamoni	Grand							T.	.12							.22		T.				.33				T.	.08	T.	.05	T.	1.53	2.33
Le Mars	Floyd							.05								.16			.01			.06				T.			.02		T.	0.30
Lenox	Missouri							.10							T.					.05		.19				.05				.85	1.27	2.51
Leon	Grand														T.	T.		T.				T.				T.	T.		.10	.25	1.00	1.35
Little Sioux	Little Sioux							.04													.40					.03			.03	.05	.32	0.87
Logan	Missouri							.10											.04			.22				T.	.08			.52	.36	1.32
Mount Ayr	Grand							.12							T.	.08						.21				T.	.02		.10	.76	1.45	2.74
Murray	do							.07								T.							.15					.04	.07	.20	.94	1.47
Northboro	Missouri							.10														.12				.03				.43	.94	1.62
Odebolt	Little Sioux			T.				T.								.20			.10			.16								.30		0.76
Onawa	Missouri							.04						T.	.05	.10	T.		.05			.15				T.			.03		.30	0.72
Pacific Junction	do							.07							T.		T.	T.	T.			.39				.10	T.	T.	T.	.16	.77	1.49
Rock Rapids	Big Sioux							.38								.20						.75										1.33
Sheldon	Floyd																															
Sibley	Big Sioux							.38	.04							.20				.03		.43					.03			.05		1.16
Sioux Center	Floyd							.15								.30						.32								.02		0.79
Sioux City	Missouri						T.	.07							.09	.01					.02	.26	.05			T.				T.	.11	0.61
Spencer	Little Sioux							.32								.20						.22	.03									0.77
Thurman	Missouri							.08							T.							.32				T.				.32	1.15	1.87
Washta	Little Sioux							T.							.10							.27	T.			T.					.03	0.40
Kansas.																																
Abilene	Smoky Hill														T.	.06	T.					.20				.06				.10	1.18	1.60
Agricultural College	Kansas			T.											.02	.23		.05				.02				.01		T.	.03	.45	1.11	1.92
Alton	Solomon			T.											T.	T.		T.				.12				T.			T.	.40	.85	1.37
Atchison	Missouri								T.						.21	.05					.31										1.37	1.94
Beloit	Solomon				T.	T.										T.			T.			.25									1.67	1.92
Blakeman	Republican																					.20							.07		.24	0.51
Blue Rapids	Blue																					.25				.04	.03			.88	1.20	2.40
Cawker City	Solomon				T.										T.			T.	.01			.24				.03			T.	.09	1.21	1.58
Centralia	Blue							T.							T.			.02				.19				.05	T.	T.	T.	.10	.84	1.20
Chapman	Smoky Hill															.01	.03				.08		T.		T.	T.	T.	.04	T.			
Clay Center	Republican														T.							.20				T.		T.	T.		.83	1.03
Colby	do			T.							.02				.02	.02		.02			.25								.05	.03	.15	0.56
Concordia	do				T.										.01			.01			.50				T.	.01		.01	.01	.35	1.00	1.90
Densmore	Solomon														T.							.25							T.		.64	0.89
Dresden	Republican				T.			T.										T.				.36							T.	.31		0.67
Ellsworth	Smoky Hill	T.			.03										.10	T.						.35				.05		T.	T.	.90	.03	1.46
Emmett	Kansas													T.	.21	.06					.03	.02					T.	T.	.43	.11	.42	1.28
Eskridge	Osage						T.								.60	.18						.30				.10				.18	.42	1.65	3.43
Farnsworth	Smoky Hill			T.	.13																.30					T.			.05	.18	.27	0.93
Fort Scott	Osage		T.												T.	.36					.05	.19	.59					T.	T.	.04	.04	1.27
Frankfort	Blue														T.											T.			T.	.98		0.98
Garnett	Osage			T.				T.							.15	.25	.04				.12		.05			T.			.08	T.	.65	1.34
Goodland	Republican																															
Grainfield	Saline				.02										.01			T.			.12								.04	.37	.02	0.58
Hanover	Blue																	T.				.22				.17			T.	T.	1.64	2.03
Harrison	Republican				T.										T.			T.			.31								.36		1.33	2.00
Hays	Smoky Hill				.03											.02	T.		.01		.22	T.						T.	.01	.18	.25	0.72
Hill City	Solomon																	.16						T.	T.				T.	T.	.60	0.76
Holton	Kansas															.05		T.				.24				T.	T.		.60	.03	.87	1.79
Horton	do							T.							.01	.02		T.				.30				T.	.01		.09	.04	.86	1.33
Hoxie	Solomon															T.		T.				.18							.03		.47	0.68
Lawrence	Kansas														.50	.05		T.			.18					T.			.85	.05	.67	2.30
Leavenworth	Missouri								T.						.22	.15						.30				T.			.70	.03	1.15	2.55
Lebanon	Solomon														T.							.46							.09	.32	1.33	2.20
Lenora	do				T.										.03			.01				.28							.02	.04	.48	0.86
Leoti	Smoky Hill			T.	.05										T.			.01			.32	.01								T.	.15	0.54
Lincoln	Saline			T.	.03	T.									.03	T.					.32					.07	T.	T.		.16	.57	1.18
Lindsborg	Smoky Hill															T.	T.	T.			.19			T.		T.	T.	T.	T.	T.	1.92	2.11
McCracken	do				.10										T.							.23				.03				.35	.36	1.07
Manhattan	Kansas			T.											.15	T.	T.	T.			T.	.27			T.	T.			T.	.18	1.23	1.83
Minneapolis	Solomon				T.										.04	.01		T.			.46					T.	.01	T.	T.	.25	.44	1.21
Moran	Osage	T.						T.							T.	.18							1.37			T.		.06	T.	.19	.06	1.86
Natoma	Saline																															
Norton	Republican			T.	T.			T.							.04						T.	.16				T.			.03	T.	.48	0.71
Oberlin	do														.03	.01					T.	.41							.04	T.	.25	0.74
Oketo	Blue							T.							T.		T.	T.	T.		.12		T.			.02			.38	T.	.85	1.37
Olathe	Kansas														1.24	.06		.01				.20	.01			.01	.01		.07	.02	.82	2.45
Oskaloosa	do														.30	T.	T.					.25									.85	1.40
Ottawa	Osage														.63	.05		.02	.05			.20	.02							.06	1.02	2.05
Phillipsburg	Solomon														.04	.01		T.				.40				T.		.02	.01	.05	.94	1.47
Plainville	Saline																															
Pleasanton	Osage														.13	.22						.23	2.10					.12	.07	.05	.25	3.17
Quenemo	do							T.							.31	.09			T.		.31		T.			T.	T.		.45	.11	.46	1.73
Republic	Republican														T.	T.		.02	T.			.33				.02			T.	.02	1.83	2.22
Russell	Smoky Hill					T.									T.	T.						.15							T.	.10	.40	0.65
Russell Springs	do				.06										T.			T.			.20	.05							.02		.30	0.63
St. Francis	Republican							T.							.01			T.				.14							.02	.02	.01	0.20
Salina	Smoky Hill			T.	T.		T.								.02	.02		T.				.18				.01	T.	T.	T.	.40	.36	0.99
Scott	do			T.	.14																								.02	T.	.18	0.34
Smith Center	Solomon														T.			.08				.22			.01					.55	.94	1.80
Topeka	Kansas													T.	.43	.05		T.			.28					T.		T.	.04	.07	.44	1.31
Tribune	Smoky Hill			T.	.10										T.			.02			.05	.08			T.				T.	T.	.10	0.35
Valley Falls	Kansas														.15	.08		.02			T.	.25					.01		.04	.03	1.40	1.98
Vinland	do														.69	.02		.02	.06		.23		.05			.02			.36	.06	.25	1.76
Wakeeney	Smoky Hill														T.							.23							.07	.36	.46	1.12
Wallace	do			T.											T.			.09			.16							.02			.10	0.37
Wamego	Kansas						T.								.17	.07	T.				T.	.15				T.	T.		.11	.30	.70	1.50

TABLE 2.—*Daily precipitation for November, 1913. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Missouri.																																
Amoret	Osage													T.	.27	.08					T.		2.50			T.		.09	.06		.11	3.11
Appleton City	do												.15					.05			.10									.82		1.12
Arlington ‖	Gasconade														.07	.65	.72							.38					.08	.05	.28	2.23
Arthur	Osage																															
Avalon	Grand				.32										.30	.75							.60					.53		1.40	3.90
Bethany	do																															
Bolivar	Osage		T.											T.	T.	.22	.28					.05	.41			T.	.04	.60	.64		.13	2.37
Boonville ‖	Missouri														.57	1.10	.06					.05	.92	.27			.05		.06		.60	3.68
Brunswick ‖	Grand								T.						.32	1.58	.09		T.				.41						.05		.80	3.25
Clinton	Osage														1.00	.10							.27						.13		.51	2.01
Columbia	Missouri							.04						.21	1.68	.27		.01		T.			.59			.07	T.	.05	.10	T.	.22	3.24
Conception	do						T.	.10							T.			T.				.18				T.	T.	T.	.04		.96	1.28
Crocker	Gasconade														.32	.40													T.	T.	.40	1.12
Duncan	Osage		T.					.12							T.	.15	.19						.41			.03	T.	.11	1.42	T.	.48	2.91
Eldon	do							.01							1.10	.24	T.	T.					.46			T.	.08	.05	.88	T.	.52	3.34
Fayette	Missouri							.03							1.80	.52					T.	.06	.40			.05			.11		.58	3.55
Fulton	do							.20							2.10	.22							.47						.25		.20	3.44
Glasgow ‖	do														.86	.92							.64	.02					.24		.58	3.26
Grant City	Grand														T.		T.		T.	T.	T.	.35	T.			T.	T.	T.	T.	1.32	1.38	3.05
Harrisonville ‖	Osage														1.15	.40	.10	.03				.22	1.50				T.		.05		.30	3.75
Hermann ‖	Missouri				T.				.03						1.56	1.16	.05		T.					.26			.16		.10	.06	.12	3.50
Houston	Gasconade		T.		T.									T.	T.	.32					T.	T.	.33			T.	T.	.15	.55	.30	.55	2.20
Jefferson City ‖	Missouri														1.20	1.10	.10							.31			.05		.35		.20	3.31
Kansas City	do														.81	.04					.08	.09							.07	.01	.70	1.80
Keytesville	Chariton								.02						2.00							.62						.19			.77	3.60
Kidder ‖	Grand														.16	.12					.10								.12		1.02	1.52
Lamonte	Missouri		T.	T.				T.	T.					T.	1.38	.55	.07	T.	T.	T.	T.	.10	1.25			T.		T.	.25	T.	1.22	4.82
Lebanon	Osage													48									.52					1.65	.51	.90		4.06
Lexington ‖	Missouri		02												.39	1.05	.08					.15	.05				T.		.10		.30	2.14
Liberty	do														1.40	.11						.21						.27			.35	2.34
Lockwood	Osage															.29	.21					.15	.73					.38				1.76
Marshall	Missouri		T.					T.	T.					T.	1.20	.72	T.	T.		T.	T.	.08	.38		.03				.18		1.13	4.02
Maryville ‖	do								.10										.03			.19								1.07	.67	2.06
Mount Vernon	Osage															.38	.13						1.60			T.		1.30	T.		.33	3.74
Nevada	do			.11				T.							.09	.20			T.	T.	.28		1.28			T.			.10	.02		2.08
Oregon	Missouri						T.	.08								.07			T.			.26				T.			1.00	.15	.98	2.54
Rolla	Gasconade														.38	.40							.50			T.		.14	.10		.23	1.75
St. Catherine	Grand							T.	.02					.07	.08	.41	.01	T.			T.		.12			.01	T.		.11		.60	1.43
St. Charles	Missouri								T.						2.21	.55	.08						.10				.49		T.	.25	.53	4.21
St. Joseph	do							.03	T.					T.	.09	.05		T.	T.		.19	.05				T	T.		.02	T.	1.03	1.46
St. Louis (1)	Mississippi			T.				T.	.01					T.	1.64	.25	T.						.22			.06	.08	.16	.23	.29	.18	3.12
St. Louis (2)	do								.01	.03					1.50	.14	.23						.20			.03	.13	.17	.14	.50	.20	3.28
Sublett	Chariton																															
Tarkio	Missouri																					.31									1.10	1.41
Trenton	Grand							.11						T.	.18	.12		T.	T.		.07				T.	T.	T.	.11	T.	.70	.92	2.21
Unionville ‖	Chariton								T.							.03			.06			.03					T.	T.	T.	.03	.10	0.25
Warrensburg	Missouri		T.					T.	T.						1.87	.42	.02			.04	T.	.11	.62			T.	T.	T.	.05	T.	.84	3.97
Warrenton ‖	do								.05						1.38	1.38	.05							.32			.27		.04	.24	.12	3.85
Warsaw	Osage		T.						T.					T.	.36	.23	.12	T.			T.	.11	.41			T.			1.56	T.	.52	3.31
Wheatland	do													.15	.35								1.40	.05				.40	.10	.10		2.55

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 6, Missouri Valley.*

Date.	Wyoming.																Montana.											
	Basin.		Cheyenne.		Fort Laramie.		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings.		Dillon.		Havre.		Helena.		Lewistown.§§		Malta.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	68	20	58	35	68	20	62	27	60	30	53	30	61	26	52	36	65	30	68	29	58	37	51	36	52	18	49	14
2....	69	18	55	26	66	23	42	28	52	32	47	27	43	24	42	19	44	32	48	31	45	28	42	26	37	32	48	16
3....	70	20	29	23	40	29	32	18	40	22	29	23	44	17	40	16	45	23	40	16	46	19	40	20	55	11	52	14
4....	68	20	40	23	54	25	41	15	50	20	40	21	51	22	39	22	58	21	45	21	57	17	52	24	55	18	54	26
5....	70	22	51	31	62	29	54	22	58	30	47	27	55	29	45	34	61	27	51	28	56	36	55	32	53	22	52	22
6....	68	26	56	36	64	35	56	37	48	34	51	40	52	34	43	28	59	36	60	29	46	35	48	36	57	31	51	32
7....	69	20	41	26	47	25	49	23	40	32	42	30	45	23	40	19	52	31	58	31	44	28	46	34	44	27	48	18
8....	70	20	35	18	60	15	58	19	51	22	51	24	53	21	46	22	58	23	57	32	56	25	47	32	61	24	48	24
9....	68	18	59	31	65	20	54	25	54	26	57	34	55	22	54	27	64	24	52	24	46	27	50	32	69	31	50	28
10....	71	22	66	35	.....	15	52	25	57	30	56	41	64	24	53	31	60	30	57	21	59	30	50	37	60	33	46	24
11....	74	24	64	38	.....	20	59	31	65	35	57	42	64	28	41	33	51	28	55	15	40	33	49	35	36	35	41	31
12....	67	14	57	38	.....	32	54	28	42	30	50	38	48	23	41	24	51	31	61	17	33	10	44	29	37	20	38	25
13....	68	20	48	34	.....	34	39	21	48	24	43	29	45	18	40	18	48	18	60	17	24	8	42	26	42	12	28	11
14....	71	18	49	28	.....	28	38	20	36	30	43	27	46	17	40	12	52	17	58	19	22	15	46	24	43	12	30	9
15....	70	24	47	28	.....	21	47	18	47	20	41	29	56	16	35	22	55	21	55	16	49	9	49	30	50	18	31	18
16....	72	20	59	35	63	35	52	23	54	30	47	32	63	27	45	29	64	36	54	19	59	44	59	38	53	28	40	21
17....	69	18	62	36	64	30	55	21	63	30	52	37	60	24	41	30	48	34	59	20	49	31	50	40	54	42	36	15
18....	68	17	52	34	57	30	51	26	53	32	48	38	52	31	41	34	61	35	57	24	37	24	50	33	54	34	38	22
19....	64	17	50	31	50	39	54	28	43	30	47	38	56	30	39	32	59	24	55	18	45	18	48	30	49	20	42	21
20....	62	14	54	31	63	26	52	25	60	35	48	37	50	24	37	15	45	26	51	15	41	28	42	27	42	21	40	19
21....	62	16	43	26	47	23	37	18	45	25	42	30	45	18	20	14	41	16	49	14	28	16	34	20	35	8	30	21
22....	60	18	38	16	43	16	40	14	40	18	31	18	48	20	25	9	49	17	46	8	39	16	43	25	35	7	38	11
23....	61	17	56	22	60	27	47	14	54	20	39	23	55	22	36	17	58	27	48	11	46	26	49	32	47	20	40	18
24....	60	17	56	19	65	9	44	12	58	26	45	22	54	14	40	13	60	28	48	15	56	31	46	27	50	22	34	15
25....	56	8	53	32	60	17	47	19	54	30	44	32	58	17	39	29	60	18	52	17	30	24	41	27	51	24	42	18
26....	54	10	50	23	58	29	45	19	50	28	44	30	55	21	39	30	41	20	49	14	53	28	48	30	47	26	35	16
27....	58	16	44	25	57	23	45	20	48	25	42	32	54	18	39	28	60	20	51	16	42	20	49	30	52	27	33	22
28....	60	18	43	21	45	25	34	17	40	25	41	24	59	16	31	20	49	29	50	20	44	27	40	23	41	25	30	19
29....	60	20	37	15	52	12	25	10	40	18	39	20	34	13	31	23	41	15	54	22	47	18	42	24	47	14	28	12
30....	54	18	36	15	44	14	34	14	40	25	35	28	41	24	33	23	50	27	51	19	46	28	40	27	41	20	37	22
Mns..	65.4	18 3	50.3	27.9	56.4[1]	24.2	46.6	21.2	49.7	27.1	45.0	30.1	51.6	22.1	39.6	25.6	53.6	25.5	53.3	19.9	45.0	24.5	46.4	29.5	48.3	22.7	40.3	19.5

Date.	Montana.				North Dakota.										South Dakota.											
	Miles City.		Poplar.		Berthold Agency.		Bismarck.		Dickinson.		Jamestown.§§		Williston.		Aberdeen.§§		Ellingson.		Huron.		Kadoka.		Kimball.		Pierre.		Rapid City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	62	33	61	22	58	20	57	26	59	22	49	19	55	27	55	14	59	24	52	28	65	26	58	28	58	33	64	31
2....	54	34	60	22	50	22	45	27	44	24	48	25	42	25	54	30	41	25	62	30	68	30	70	33	58	29	60	34
3....	49	21	62	28	49	23	49	27	46	20	28	27	29	28	56	36	47	23	56	28	50	22	57	27	54	28	50	25
4....	56	32	58	27	59	21	58	22	59	18	56	25	56	27	58	19	58	20	57	20	58	17	58	25	57	21	57	17
5....	60	32	65	27	61	23	64	31	61	31	63	25	58	30	62	26	63	30	65	37	66	32	60	31	64	42	61	37
6....	61	36	58	36	57	26	62	28	59	25	59	28	53	34	65	36	61	33	68	46	67	38	66	35	69	43	63	41
7....	48	37	44	34	44	32	42	31	45	32	42	33	39	32	45	39	47	28	57	31	60	28	60	33	50	35	44	30
8....	54	26	55	25	47	18	45	24	44	28	40	24	47	25	48	26	48	24	40	24	48	30	47	35	42	28	49	27
9....	55	26	50	21	38	12	35	18	38	18	30	25	36	17	37	32	40	16	37	19	46	23	38	18	41	22	45	26
10....	60	30	60	20	42	17	36	16	42	18	31	13	46	24	47	13	40	17	35	14	49	19	38	15	40	16	46	23
11....	50	30	51	37	54	22	47	24	51	24	40	21	44	30	43	18	60	23	57	26	70	39	59	27	51	26	67	30
12....	47	36	42	25	42	30	41	24	46	33	43	29	36	23	45	28	45	31	44	32	57	33	60	33	46	35	47	29
13....	39	22	45	21	40	.....	32	12	34	16	30	12	29	16	43	30	40	20	41	24	47	32	38	25	38	28	45	26
14....	49	21	50	15	42	6	38	9	41	14	36	4	41	15	45	11	34	20	33	16	40	29	34	23	34	23	45	30
15....	55	21	44	22	.....	24	37	28	48	22	37	27	44	26	45	16	53	25	37	30	52	27	48	30	38	32	56	22
16....	64	40	60	20	60	34	61	30	61	30	54	30	62	36	55	22	63	32	62	27	67	34	60	28	65	30	65	37
17....	56	45	51	33	60	38	63	32	61	33	62	32	54	28	61	27	62	30	63	30	69	35	64	35	66	32	66	34
18....	54	36	45	28	60	28	38	30	47	31	34	28	40	27	50	27	45	27	50	29	56	32	64	35	47	33	46	34
19....	58	33	50	16	51	22	50	28	54	26	45	29	50	27	52	16	55	25	53	28	53	27	49	32	55	27	58	30
20....	46	28	51	40	52	16	55	29	55	20	53	32	42	27	61	22	60	26	60	33	69	39	63	33	71	44	63	42
21....	44	27	42	24	39	26	41	23	39	28	43	33	39	22	48	38	45	28	49	39	54	33	55	40	54	41	52	28
22....	46	22	38	15	41	15	38	22	37	13	39	26	39	17	44	32	39	18	47	26	.....	.....	47	32	49	31	45	25
23....	52	28	50	19	47	19	46	26	45	21	40	20	44	25	52	21	49	24	56	22	59	23	57	24	57	31	56	26
24....	56	26	45	23	55	17	48	25	45	22	47	12	57	25	60	21	58	22	62	22	68	34	62	35	69	28	69	26
25....	48	24	62	20	44	14	41	22	40	18	38	24	41	22	49	22	50	18	58	33	59	33	59	39	55	30	56	30
26....	50	28	66	21	47	16	41	18	54	16	37	20	48	26	50	19	55	15	45	29	44	18	44	19	44	20	55	28
27....	47	20	55	18	58	17	39	26	57	22	38	22	53	21	51	29	53	18	50	36	59	22	53	35	46	28	54	28
28....	44	26	45	23	42	18	31	26	44	15	39	25	44	22	44	21	45	12	47	32	47	23	58	32	35	24	42	28
29....	42	21	47	16	49	18	50	27	48	16	45	29	44	22	52	16	48	19	48	27	50	23	48	25	50	26	45	23
30....	44	24	40	26	45	20	44	25	42	22	42	20	41	25	50	18	42	26	47	18	43	21	40	27	42	21	45	26
Mns..	51.7	28.8	51.7	24.1	49.4[a]	21.2[a]	45.8	24.5	48.2	22.6	43.9	24.0	45.8	25.0	50.9	24.2	50.2	23.3	51.3	27.9	56.6[a]	28.3[a]	53.8	29.6	51.5	29.6	53.9	29.1

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 6*—Continued.

Date.	South Dakota.						Colorado.				Nebraska.															
	Sioux Falls.§§		Watertown.§§		Yankton.		Denver.		Wray.		Alma.		Bridgeport.		Grand Island.§§		Hay Springs.		Hebron.		Lincoln.		North Platte.		Oakdale.		Omaha.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	51	18	51	11	57	32	65	31	58	20	55	26	68	20	63	30	64	24	61	30	59	32	65	30	58	28	56	30
2	52	20	60	24	66	38	60	32	58	25	64	28	66	23	63	39	69	29	62	39	62	42	71	30	63	38	60	40
3	62	20	52	28	52	33	32	26	52	35	55	29	.....	32	55	39	48	28	53	40	52	34	50	27	51	26	49	42
4	62	21	55	20	58	26	48	21	50	35	50	32	52	29	53	24	50	16	55	26	58	26	54	27	55	17	58	29
5	62	22	60	20	62	40	54	29	64	28	50	34	54	25	61	45	62	25	62	41	65	42	61	31	60	33	64	41
6	49	36	62	39	60	50	66	35	69	24	60	42	68	24	60	49	61	32	63	52	64	52	68	39	60	47	64	52
7	48	36	41	40	50	34	55	32	62	33	50	35	47	27	52	42	45	39	55	46	57	38	52	30	47	33	56	39
8	42	35	38	25	41	27	58	25	58	21	50	23	57	11	51	26	51	22	50	30	45	28	55	22	43	22	43	30
9	33	26	35	20	37	22	62	31	64	18	55	16	60	19	49	21	52	17	50	22	45	23	53	19	38	16	40	24
10	48	15	38	12	37	17	75	35	70	16	49	11	60	17	45	17	68	17	45	18	41	19	51	17	40	13	40	22
11	50	20	50	13	53	28	75	40	74	27	59	20	76	20	54	27	70	26	60	28	56	29	75	21	54	21	52	29
12	45	28	38	25	48	34	68	40	70	31	63	22	68	33	54	40	58	28	59	31	56	36	61	31	45	35	52	37
13	45	21	43	26	45	26	55	34	53	29	52	23	55	33	48	34	48	22	52	29	49	30	51	35	47	31	46	29
14	35	20	39	11	36	29	44	32	42	31	44	32	46	32	44	34	45	32	43	37	46	33	40	35	38	33	46	35
15	40	20	34	12	42	31	56	31	62	29	50	32	57	18	45	34	55	18	50	37	42	32	59	30	44	28	42	35
16	50	30	51	24	63	30	66	33	64	22	68	20	66	18	62	37	58	26	67	38	70	31	67	25	61	23	62	33
17	58	38	62	31	69	42	70	37	70	27	63	28	69	25	61	42	61	31	65	42	61	45	67	28	65	33	57	42
18	60	32	44	29	51	35	58	36	62	30	64	45	52	28	65	45	60	32	72	53	65	56	59	31	55	36	63	56
19	58	32	55	31	52	36	58	34	62	34	69	40	62	31	64	43	62	36	69	52	64	44	65	33	55	32	64	46
20	58	38	58	30	64	33	53	35	70	32	72	29	.....	.....	69	40	62	32	70	36	72	40	66	37	66	30	72	42
21	52	40	51	36	57	40	58	31	58	32	63	40	.....	.....	58	47	55	30	60	46	61	46	55	36	52	42	63	46
22	50	28	44	34	47	31	48	23	50	25	50	36	.....	.....	51	40	44	22	52	38	53	35	46	22	48	28	53	40
23	55	30	54	24	57	30	61	25	65	15	60	12	63	9	58	31	56	20	58	26	60	32	60	14	57	25	59	32
24	58	25	54	23	61	27	62	30	61	16	57	15	66	10	61	32	64	25	60	25	62	31	61	17	59	23	60	36
25	51	27	57	25	48	36	62	32	66	39	50	35	63	23	45	39	60	25	46	41	47	43	55	33	46	32	48	42
26	50	37	56	29	41	29	57	35	61	26	68	23	60	30	57	31	55	26	57	43	48	43	57	28	45	25	51	46
27	50	40	48	40	54	40	51	28	64	19	50	35	.....	.....	56	35	54	28	53	42	53	41	60	21	44	38	52	39
28	48	40	50	39	53	44	49	29	48	20	50	42	54	16	52	44	46	20	55	41	56	46	43	35	54	44	55	48
29	50	28	49	34	48	32	43	21	45	22	50	35	45	8	49	38	48	13	47	43	51	44	47	24	48	33	50	45
30	.....	30	42	19	46	32	36	17	45	22	43	35	43	13	45	41	42	18	49	43	49	44	44	32	42	31	51	46
Mns..	50.8[a]	28.4	49.1	25.8	51.8	32.8	56.8	30.7	59.9	26.1	56.1	29.2	59.1[e]	22.1[d]	55.0	36.2	55.8	25.3	56.7	37.2	55.6	37.2	57.3	28.0	51.3	29.9	54.3	38.4

Date.	Valentine, Nebr.		Iowa.						Kansas.										Missouri.							
			Clarinda.§§		Sibley.§§		Sioux City.		Colby.		Concordia.		Salina.		Topeka.		Wakeeney.		Columbia.		Kansas City.		St. Louis.		Unionville.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	66	33	56	16	53	24	53	28	64	22	61	30	59	33	52	32	63	30	51	27	53	32	48	31	50	18
2	75	31	60	24	60	32	61	38	71	27	60	41	56	38	52	42	65	34	61	39	52	40	61	38	58	26
3	49	20	53	41	52	37	52	35	62	36	52	39	19	43	54	42	57	40	61	47	57	45	64	49	56	36
4	55	16	58	24	58	20	55	29	47	.....	52	40	51	38	55	39	47	38	58	35	55	39	57	42	62	26
5	61	37	65	24	61	32	62	38	58	.....	61	36	62	33	66	38	55	39	61	33	65	41	57	40	64	30
6	67	37	63	33	59	46	60	52	67	31	63	50	52	40	64	53	61	40	69	42	67	50	68	41	62	36
7	46	29	51	45	45	42	54	35	.....	27	58	39	62	41	60	42	59	44	59	43	60	43	67	50	60	34
8	45	28	43	39	39	27	42	26	55	.....	52	33	50	31	47	31	54	24	45	32	43	34	50	35	44	32
9	39	22	43	18	36	19	36	25	60	.....	51	24	49	24	49	25	54	26	46	28	47	28	43	28	45	25
10	49	18	40	22	35	15	37	19	58	.....	46	22	48	20	44	25	51	21	40	24	43	28	38	29	40	24
11	75	29	51	20	49	18	48	26	73	.....	66	26	65	40	63	28	65	25	58	21	62	31	48	29	52	17
12	47	29	63	27	48	30	49	32	67	34	62	39	68	40	71	47	65	33	74	50	70	53	73	40	70	24
13	44	27	51	29	43	24	46	27	58	30	54	33	60	32	54	37	55	30	65	49	53	41	70	51	67	32
14	39	32	47	29	33	22	38	30	45	33	45	39	44	35	50	41	45	34	49	42	48	39	51	44	46	30
15	52	31	41	35	36	28	39	32	60	31	50	38	43	37	43	38	56	35	44	42	42	38	53	42	44	35
16	65	31	62	29	45	30	54	30	69	27	67	31	68	31	49	36	70	31	48	39	47	39	48	41	45	34
17	66	35	57	30	49	32	55	38	65	34	70	45	70	43	60	43	67	44	59	37	62	43	55	38	54	35
18	56	30	69	45	54	35	55	47	65	35	74	58	69	42	73	57	67	44	75	57	72	60	70	53	70	40
19	55	40	66	55	57	37	56	42	68	43	70	49	65	43	72	58	70	45	74	62	74	64	72	62	72	50
20	69	37	73	43	61	37	69	42	68	37	72	44	75	50	74	52	70	39	75	63	74	60	74	60	74	60
21	54	38	56	49	55	45	61	45	63	37	64	49	70	48	67	52	64	42	77	64	68	56	75	60	64	61
22	46	24	54	40	49	36	49	35	52	33	54	35	59	43	56	41	54	37	69	49	64	46	73	52	66	46
23	60	24	58	24	51	23	56	31	62	20	61	30	60	27	56	34	61	24	54	38	55	40	53	44	54	33
24	63	28	58	25	51	23	58	30	57	23	60	30	58	25	60	33	54	27	57	32	59	39	57	42	56	30
25	63	29	50	40	45	39	47	41	55	36	51	42	49	34	51	46	62	37	54	46	51	48	53	44	58	27
26	55	25	56	43	.....	41	48	39	64	34	56	41	50	40	57	45	67	35	57	46	58	50	60	46	56	38
27	63	25	54	41	49	.....	51	44	60	24	55	40	48	42	56	41	57	30	63	52	58	50	64	53	57	45
28	51	32	56	42	47	39	52	47	53	38	59	49	54	45	64	54	50	38	66	57	63	56	62	55	62	47
29	49	23	56	50	48	45	50	36	45	33	57	46	53	46	59	56	49	38	63	57	60	56	64	58	60	55
30	42	20	56	50	42	33	42	36	43	33	54	47	54	45	63	51	44	36	66	53	63	56	67	54	58	52
Mns...	55.5	28.7	55.5	34.4	48.6[a]	31.4[a]	51.2	35.2	59.8[a]	36.6[f]	58.6	38.8	57.3	37.6	58.0	42.0	58.6	34.6	59.9	43.5	58.2	44.8	59.8	45.0	57.5	35.9

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.
EDWARD D. COBERLY, Acting District Editor.

GENERAL SUMMARY.

Unseasonably warm weather prevailed throughout the month, except that from the 7th to 11th a cool wave overspread the district giving freezing temperatures nearly to the Gulf Coast in Louisiana. The precipitation was well distributed throughout the month, except in Louisiana, where there was no rain of consequence until the last four days.

The following table summarizes the chief features of meteorological interest in the various portions of the district:

States and portions of States lying within District No. 7.	Mean temperature.	Departure from the normal.	Mean precipitation.	Departure from the normal.	Greatest precipitation in 24 hours.	Mean snowfall.	Number of days—				Prevailing wind direction.
							With 0.01 inch or more.	Clear.	Partly cloudy.	Cloudy.	
Colorado	41.3	+3.8	0.56	−0.21	0.80	6.9	3	18	6	6	w.
New Mexico	46.2	+3.8	1.04	+0.02	1.35	2.9	4	15	10	5	sw.
Texas	54.4	+6.2	2.66	+0.75	3.34	4.6	5	11	7	12	s.
Kansas	50.5	+6.3	2.03	+0.61	2.16	0.1	7	11	7	12	s.
Oklahoma	55.7	+5.8	3.67	+1.69	4.08	0	7	10	8	12	s.
Missouri	53.7	+7.1	2.61	−0.34	2.20	T.	7	11	8	11	s.
Tennessee	55.0	+5.3	1.31	−3.31	1.05	0	5	15	5	10	s.
Arkansas	57.6	+6.7	2.47	−1.15	2.70	4.8	5	10	9	11	s.
Mississippi	59.2	+4.7	2.02	−1.46	3.21	0	3	17	7	6	se.
Louisiana	63.7	+4.4	2.73	−0.69	3.09	0	3		6	8	s.

TEMPERATURE.

Mean temperatures were above normal throughout the district, the departures ranging from +2.1° to +9.4°. Maximum temperatures of 80° or higher were reported from one or more stations in all States or parts of States in the district, except in Tennessee, where the highest reading was 79°. The highest temperature recorded, 95°, occurred at Reserve, La. Monthly minimum temperatures were generally below 20° over the western, between 20° and 30° over the northeastern, and between 30° and 40° over the southeastern portion of the district. The lowest temperature recorded, 2°, occurred at Elizabethtown, N. Mex., and a minimum reading of 4° was reported from Leadville, Colo.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—The precipitation was below the normal over the upper and lower portions of this drainage area and above the normal over the central portion. In Colorado the average from 32 stations was 0.56 inch, about 0.2 inch below the normal. Over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma the average from 46 stations was 2.10 inches, about 0.5 inch above the normal. In New Mexico the average from 40 stations in the Canadian Valley was 0.96 inch, about the normal amount. Over those portions of the Canadian Valley that lie in Texas and Oklahoma the average from 30 stations was 3.22 inches, about 1.7 inches above normal. The amounts from 21 stations in the Cimarron Valley averaged 2.79 inches, about 1.3 inches above the normal. Over the Verdigris Valley the average from 9 stations was 2.46 inches, about 0.6 inch above the normal, and over the Neosho Valley the average from 18 stations was 2 inches, about 0.2 inch below the normal. Below the Oklahoma-Arkansas line the precipitation from 15 stations in the Arkansas Valley proper averaged 2.23 inches, about 1.3 inches below normal.

Red River and tributaries.—The precipitation was above the normal over the upper, and below over the lower portion of this drainage area. In those portions of this drainage area that lie in New Mexico, Texas, and Oklahoma the amounts from 49 stations averaged 3.63 inches, about 2.2 inches above the normal. Below the Texas-Arkansas line the precipitation was not so heavy and the average from 18 stations was 2.27 inches, about 1.3 inches below the normal.

Mississippi River south of St. Louis and small tributaries.—The precipitation was generally light throughout this drainage area. In the immediate Mississippi Valley the average from 37 stations was 2.26 inches, about 1.6 inches below the normal. The average from 23 stations in the Valley of the White was 2.70 inches, about 0.5 inch below the normal. Over the Yazoo Valley the average from 25 stations was 1.74 inches, about 2 inches below normal. In the Valley of the Big Black the average was 2.70 inches, about 0.2 inch below the normal. In the Ouachita Valley the average from 21 stations was 2.53 inches, being about 1.3 inches below the normal.

Louisiana coastal plain.—The precipitation was generally light over this drainage area, the average from 40 stations being 2.67 inches, about 0.4 inch below the normal.

SNOWFALL.

Snow, ranging from a trace to 29.4 inches, occurred generally over the mountainous portions of the Colorado and New Mexico areas, and there was a small amount at a few stations in northern and western Kansas, the extreme northwestern portion of the Texas Panhandle, and in scattered localities in northeastern Arkansas and in the Missouri area. Owing to the warm weather, very little, if any, was added to the stored snow in the mountains.

RIVERS.

The Mississippi River below St. Louis, the Ouachita and Red Rivers changed very little, or fell slightly, during the first 25 days, but from the 26th to 30th there was a general rise.

The Arkansas River was below the normal stage throughout the month.

The Canadian and Washita Rivers in Oklahoma were above the normal stage at the close of the month, but no floods were reported.

Changes were slight and unimportant in the White and Black Rivers in Arkansas.

TABLE 1.—*Climatological data for* ***November, 1913.*** *District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Colorado.																			
Buena Vista	Chaffee	7,955	14	39.8	+ 8.5	62	9	10	22†	46c	0.30	− 0.10	0.30	3.0	1	22c	2c	3c	w.	C. A. Short.
Calhan	El Paso	6,700	7	41.2	.....	70	10†	16	22	41	0.10	.....	0.10	1.0	1	25	4	1	sw.	H. B. Rice.
Canon City	Fremont	5,343	25	47.6	+ 5.0	80	10	19	23	50	0.40	− 0.05	0.25	1.0	3	22	5	3	n.	U. S. Weather Bureau.
Colorado Springs	El Paso	6,098	33	41.2	+ 3.7	67	11	20	23	36	0.05	− 0.28	0.03	0	3	15	7	8	n.	Colorado College.
Cripple Creek	Teller	9,396	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. G. Willis.
Cuchara Camps	Huerfano	8,200	4	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.69	14.5	4	20	8	2	sw.	George A. Mayes.
Eads	Kiowa	4,209	6	41.8	.....	55	6	30	24†	18	T.	.....	T.	0	0	20	5	5	e.	Mrs. Mattie A. Kerr.
Fairview	Custer	9,500	4	.....	.....	.....	.....	.....	.....	.....	1.40	.....	0.56	18.5	4	21	7	2	e.	Elizabeth L. Grey.
Florence	Fremont	5,187	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. L. E. Rupert.
Fremont Experiment Station.	El Paso	8,850	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Garfield	Chaffee	9,510	3	.....	.....	.....	.....	.....	.....	.....	0.96	.....	0.66	10.0	5	18	7	5	w.	Lloyd N. Felton.
Hamps	Elbert	5,400	20	39.7	+ 3.5	74	11	6	23	55	0.18	− 0.05	0.18	2.0	1	20		5	s.	W. Hamp.
Hermit Lake	Custer	10,000	3	.....	.....	.....	.....	.....	.....	.....	1.91	.....	0.80	22.0	4	17		6	sw.	John E. Graham.
Hoehne (near)	Las Animas	5,711	21	43.1	+ 2.2	78	10	19	30	50b	0.47	− 0.17	0.40	4.0	2	14a		9a	w.	S. W. DeBusk.
Holly	Prowers	3,380	18	45.4	+ 2.6	79	11	13	23	54	1.15	+ 0.54	0.55	.....	3	11e	0e	4e	.....	Holly Sugar Co.
La Junta	Otero	4,052	2	.....	.....	.....	.....	.....	.....	.....	0.52	.....	0.47	5.5	3	16	5	9	s.	S. M. Miller.
Lake Moraine	El Paso	10,265	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Clyde C. McReynolds.
Lamar	Prowers	3,592	23	45.1	+ 2.8	70	18	19	26	42	0.66	+ 0.21	0.60	0	2	24	4	2	sw.	J. T. Lawless.
Las Animas	Bent	3,899	45	44.2	+ 5.7	78	11	16	22	54	0.74	+ 0.41	0.56	7.0	3	10	12	8	.....	American Beet Sugar Co.
La Veta Pass	Costilla	9,000	3	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.29	9.0	3	18	7	5	w.	Clara M. Wright.
Leadville	Lake	10,248	17	29.4	+ 2.3	52	10	4	29	36	0.50	− 0.31	0.21	8.9	8	15	9	6	n.	U. S. Weather Bureau.
Limon (near)	Elbert	5,360	6	40.7	.....	70	10†	14	23	45	0.12	.....	0.12	2.0	1	25	2	3	s.	F. L. Palmer.
Madrid	Las Animas	6,361	3	.....	.....	.....	.....	.....	.....	.....	0.41	.....	0.33	3.0	3	.....	.....	.....	.....	Thomas Sawers.
Marshall Pass	Saguache	10,846	10	.....	.....	.....	.....	.....	.....	.....	0.62	− 0.57	0.27	7.0	3	10	8	12	.....	W. L. Williams.
Maxey	Baca	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. H. Alberti.
Monument	El Paso	7,200	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
North Lake	Las Animas	8,700	21	.....	.....	.....	.....	.....	.....	.....	0.66	− 0.52	0.57	7.5	2	27	2	1	nw.	James W. Ingmire.
Pueblo	Pueblo	4,734	25	42.8	+ 3.5	76	10	13	23	51	0.11	− 0.26	0.11	1.0	1	16	8	6	nw.	U. S. Weather Bureau.
Rocky Ford	Otero	4,177	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. K. Blinn.
St. Elmo	Chaffee	9,500	4	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.15	12.5	8	17	10	3	sw.	Daniel Clark.
Salida	....do	7,035	14	40.2	+ 3.0	67	9†	7	23	48	0.15	− 0.54	0.15	1.0	1	22	5	3	n.	M. D. L. Buell.
Stonewall	Las Animas	8,000	7	.....	.....	.....	.....	.....	.....	.....	0.43	.....	0.38	7.0	2	17	7	6	w.	G. A. Storz.
Trinidad	....do	5,994	17	44.4	+ 1.8	74	10	21	4	43	0.53	− 0.34	0.46	4.5	3	12	8	10	ne.	Walter Dearden.
Two Buttes	Baca	4,100	2	44.6	.....	77	11	17	10	49	0.37	.....	0.20	2.0	2	20	7	3	sw.	N. G. Jones.
Two Buttes Reservoir	....do	4,250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Walter J. Krohne.
Victor	Teller	10,100	9	35.2	.....	61	10	15	4	30	0.30	.....	0.28	5.0	2	25	4	1	w.	Fred Jones.
Vilas	Baca	3,935	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Esther Caldwell.
Westcliffe	Custer	7,864	19	37.0	+ 4.3	67	11	7	24	48	0.46	− 0.37	0.46	3.0	1	17	4	9	w.	U. S. Forest Service.
Winfield	Chaffee	9,765	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John G. Payne.
Woodman Sanatorium	El Paso	.....	2	41.8	.....	69	10	10	30	40c	0.04	.....	0.03	0.6	2	16c	8c	3c	sw.	Woodman Sanatorium.
Wortman	Lake	11,250	12	.....	.....	.....	.....	.....	.....	.....	1.50	− 0.94	0.30	29.4	11	4	12	14	nw.	Mrs. Lillie Wortman.
Yoder	El Paso	.....	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.4	0	21	4	5	se.	J. E. Bingham.
New Mexico.																				
Abbott	Mora	5,771	4	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.40	1.5	4	16	5	9	e.	Agent E. P. & S. W. R. R.
Albert	Union	4,700	23	54.3	+ 7.4	79	6	28	4	34	0.74	+ 0.06	0.33	2.0	4	12	11	7	w.	Antonio Chavez.
Aurora	Colfax	8,849	4	.....	.....	.....	.....	.....	.....	.....	0.56	.....	0.36	6.0	4	4	23	3	nw.	Miss J. Lucero.
Bell Ranch	San Miguel	4,500	14	48.6	+ 3.5	79	6	24	5	53	1.20	+ 0.23	0.49	.....	5	16	6	8	sw.	C. M. O'Donel.
Black Lake	Colfax	8,348	4	.....	.....	.....	.....	.....	.....	.....	0.64	.....	0.46	7.7	3	6	21	3	w.	R. T. Martinez.
Cabeza	San Miguel	5,406	4	.....	.....	.....	.....	.....	.....	.....	0.95	.....	0.40	0.2	5	8	11	11	nw.	Agent E. P. & S. W. R. R.
Campana	....do	4,493	4	47.7	.....	70	11†	24	4	36	1.20	.....	0.48	2.5	5	12	11	7	sw.	Do.
Chacon	Mora	9,000	4	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.85	5.5	2	4	24	2	w.	Alfred Lucero.
Cimarron (near)	Colfax	6,385	9	44.0	.....	73	10†	20	23†	52	0.53	.....	0.28	2.0	3	13	9	8	e.	William French.
Clayton	Union	5,260	8	48.3h	.....	74	10	28	29	36h	1.43	.....	0.51	9.0	6	16	11	3	sw.	Dr. N. E. Charlton.
Clovis	Curry	4,129	2	49.8	.....	72	12	24	4	37	0.81	.....	0.28	0	8	14	10	6	sw.	John H. Barry.
Cuervo	Guadalupe	4,849	4	51.6	.....	75	9	28	4†	43	1.06	.....	0.60	1.0	3	17	2	11	sw.	Agent E. P. & S. W. R. R.
Dawson	Colfax	6,396	4	44.0	.....	70	11†	20	4†	42	0.47	.....	0.28	5.0	2	9	20	1	n.	Do.
Elizabethtown	....do	8,465	8	34.6	.....	60	9	2	5	44	0.74	.....	0.43	10.5	3	14	13	3	nw.	Mabel Carrington.
Folsom	Union	6,399	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	David Rope.
Fort Union	Mora	6,835	53	42.6	+ 2.1	70	15	17	1†	47	0.65	− 0.03	0.30	.....	3	25	1	4	w.	M. C. Needham.
Hayden	Union	4,444	3	46.8	.....	75	13	18	5	32	1.08	.....	0.35	8.0	5	18	8	4	sw.	J. A. Bauer.
Hoosier Ranch	Mora	5,680	2	.....	.....	.....	.....	.....	.....	.....	0.90	.....	0.42	2.0	3	16	10	4	sw.	W. H. Guthman.
Johnsons Park	Colfax	6,722	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. J. Meloche, jr.
Johnsons Ranch	Mora	5,784	1	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.35	2.0	3	6	22	2	.....	J. W. Johnson.
Kappus	Quay	4,000	2	.....	.....	.....	.....	.....	.....	.....	1.43	.....	0.72	0	3	.....	.....	.....	.....	Louis O'Brien.
Lake Alice	Colfax	7,160	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jesse Rickman.
Logan	Quay	3,851	7	52.2	.....	88	6	23	24	56	1.23	.....	0.40	0.2	4	20	5	5	sw.	J. F. McFarland.
Lykins (near)	Roosevelt	5,000	3	.....	.....	.....	.....	.....	.....	.....	1.29	.....	0.80	0	3	16	3	11	sw.	H. Ackerman.
Maxwell (near)	Colfax	5,894	6	.....	.....	.....	.....	.....	.....	.....	0.43	.....	0.15	0	3	.....	.....	.....	.....	Dan N. Jackson.
Melrose	Curry	4,400	5	.....	.....	.....	.....	.....	.....	.....	1.67	.....	0.84	0	6	.....	.....	.....	.....	Dr. B. M. Porter.
Miami Ranch	Colfax	6,000	5	43.8	.....	74	10†	15	4	51	0.73	.....	0.55	3.5	2	14	14	2	e.	Farmers Developmnt Co.
Mills (near)	Mora	5,985	2	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.33	0.3	5	17	7	6	sw.	J. E. LaRue.
Montoya	Quay	4,335	4	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.40	3.0	3	18	6	6	w.	Agent E. P. & S. W. R. R.
Nara Visa	....do	4,225	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Bringle.
Palo Verde	Mora	5,880	2	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.31	2.0	6	15	13	2	s.	G. R. Abernathy.
Pasamonte	Union	.....	4	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.62	2.0	2	5	15	10	sw.	J. J. Heringa.
Pleasant View	Mora	5,784	2	.....	.....	.....	.....	.....	.....	.....	0.65	.....	0.25	2.5	3	20	8	2	sw.	R. W. Boulware.
Portales	Roosevelt	4,004	3	.....	.....	72	2†	23	5	39	2.26	.....	1.05	0	5	17	8	5	se.	A. R. Bowers.
Raton	Colfax	6,660	15	43.6	+ 2.2	72	11	22	4†	45	0.29	− 0.11	0.22	0.5	3	11	11	8	nw.	S. A. Wiseman.
Rociada	San Miguel	8,200	10	40.6	+ 4.0	58	8†	17	28	39	1.35	+ 0.22	0.82	7.4	2	11	13	6	w.	John P. Condon.
Rosebud	Union	4,500	2	.....	.....	.....	.....	.....	.....	.....	0.45	.....	0.28	.....	3	.....	.....	.....	.....	H. A. Nachtrieb.
Roy	Mora	5,884	4	44.6	.....	70	11†	22	3	36	1.10	.....	0.30	4.0	5	13	10	7	sw.	Agent E. P. & S. W. R. R.
St. Vrain	Curry	4,300	.....	.....	.....	.....	.....	.....	.....	.....	1.13	.....	0.68	0	4	.....	.....	.....	.....	S. A. Dow.
San Jon	Quay	4,200	6	50.8	.....	78	6	25	5	44	2.25	.....	1.35	1.0	6	17	7	6	sw.	Jesse T. White.
Solano	Mora	5,622	4	45.1	.....	71	12	11	4	40	1.39	.....	0.48	3.5	5	20	5	5	sw.	F. M. Hughes.
Springer	Colfax	5,857	21	43.0	+ 3.0	70	10†	10	1	54	0.29	− 0.20	0.15	1.5	3	27	3	0	w.	Agent A. T. & S. F. R. R.
Taylor	....do	5,661	4	43.4	.....	70	10†	20	1†	50	0.44	.....	0.13	1.0	4	18	0	12	w.	Agent E. P. & S. W. R. R.
Texico (near)	Roosevelt	4,038	.....	.....	.....	.....	.....	.....	.....	.....	2.02	.....	1.35	0	3	.....	.....	.....	.....	A. L. King.
Trementina	San Miguel	5,000	5	.....	.....	.....	.....	.....	.....	.....	0.82	.....	0.30	1.0	6	22	2	6	w.	Miss Alice Blake.
Tucumcari (near)	Quay	4,194	8	53.0	.....	78	6	27	3†	43	2.09	.....	0.75	3.5	4	18	7	5	sw.	J. F. Seaman.
Tucumcari	....do	4,194	4	51.8	.....	76	6	30	4†	34	2.13	.....	0.73	3.5	4	19	7	4	s.	Agent E. P. & S. W. R.
Valley	Union	5,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. L. Payne.
Vance (near)	....do	.....	2	.....	.....	.....	.....	.....	.....	.....	1.83	.....	0.75	12.0	7	20	3	7	sw.	C. E. Anderson.
Vermejo Park	Colfax	7,600	10	41.2	+ 4.1	72	9	10	3	48	0.71	+ 0.00	0.48	9.0	3	15	9	6	.....	H. W. Adams.
Wagon Mound (near)	Mora	6,300	4	43.2	.....	71	10	16	4	50	0.65	.....	0.29	1.0	5	18	7	5	sw.	Guy L. Barnes.

TABLE 1.—*Climatological data for November, 1913. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas.																				
Amarillo	Potter	3,676	21	50.3	+ 6.5	79	19	32	8	39	1.98	+ 0.82	0.97	0	6	18	6	6	sw.	U. S. Weather Bureau.
Archer City	Archer		2								7.05		3.34	0	11	11	10	9	s.	Charles H. Thuman.
Arthur City	Lamar	590	21								2.12	− 0.71	1.42	0	2	4	1	25	se.	J. F. Humphreys.
Bonham	Fannin	566	9	61.6		80	18†	32	10	29	3.42		1.56	0	4	8	9	13	s.	H. M. Norman.
Canadian	Hemphill	2,339	6	52.6		81	19	32	8†	38	1.97		1.00	0	7	16	2	12	s.	R. M. Hibbard.
Childress	Childress	1,869	20								3.35	+ 2.27	1.10	0	5	10	17	3	s.	George Baker.
Childress	Hardeman	1,406	5								2.83		0.76	0	9					C. W. Underwood.
Chillicothe	Donley	2,719	8	52.6		81	12†	33	8	43	2.38		1.16	0	8	14	6	10	s.	E. Homer Powell.
Clarendon	Red River	442	13	63.0[f]	+ 6.7	86	22	35	11	45	1.30	− 2.16	0.80	0	2	5[a]	20[a]	4[a]		J. W. O'Neill.
Clarksville	Armstrong	3,397	10								3.20	+ 2.14	1.10	0	6					Ft. W. & D. C. Ry.
Claude	Dallam	3,998	8	47.0		77	19	24	23	43	1.78		1.33	0	5					W. D. Griggs.
Dalhart	Grayson		13								4.58	+ 2.03	3.10	0	7	6	1	23	s.	E. B. Wilson.
Denison	Bowie		3								0.80		0.55	0	2	12	4	14	s.	Robert L. Smith.
Finley	Clay	915	21	60.0	+ 7.9	88	18	36	9†	39	5.39	+ 3.31	2.40	0	9	8	3	19	s.	C. K. Brown.
Henrietta	Marion										1.30		0.70	0	2	10	9	11	se.	J. C. Kistenmacher.
Jefferson	Hall	2,067	8																	Ft. W. & D. C. Ry.
Memphis	Roberts	2,743	10	52.2		80	19	29	17	43	3.35	+ 1.70	1.65	0	7	15	6	9	s.	J. E. Kinney.
Miami	Ochiltree		10								2.35	+ 1.35	1.10	0	5					S. J. Allen.
Ochiltree	Cottle										3.10		1.30	0	7	10	6	14	sw.	C. M. Grayum.
Paducah	Carson	3,450	4								1.70		1.45	0	2	10	12	8		J. Sid O'Keefe.
Panhandle	Lamar	592	24	60.8	+ 6.0	80	18†	34	10†	44	3.00	+ 0.16	1.75	0	9	6	13	11	e.	Robert A. Miller.
Paris	Hutchinson		6	50.0		79	19	27	23†	43	2.22		0.80	0	5	17	6	7	s.	C. S. Solomon.
Plemons	Hardeman	1,563	11	56.1	+ 4.9	80	12†	37	10†	39	3.41	+ 2.13	1.20	0	4	9	5	16	s.	William H. Crawford.
Quanah	Hopkins		3								1.28		0.68	0	2	8	2	20	s.	J. F. White.
Ringo Crossing	Hartley	4,056	3	48.7		79	6	16	5	45	1.87		1.00	8.0	4	16	9	5	sw.	R. S. Chamberlain.
Romero	Grayson	745	20	60.8	+ 7.2	79	21	38	10	34	3.91	+ 1.38	2.40	0	4	7	3	20	s.	R. A. Gibbs.
Sherman	Sherman	3,699	1	47.9		76	10†	22	23	48	1.70		1.25	1.2	4	14	4	10	s.	J. W. Elliott.
Stratford	Swisher	3,501	15	52.4	+ 4.1	80	13†	32	10	43	2.15	+ 0.19	0.75	0	4	11	12	7	sw.	Lou Mulhall.
Tulia	Collingsworth		1								2.65		1.34	0	3					J. D. Camp.
Wellington	Wichita	958	21																	J. C. Mytinger.
Wichita Falls	Titus		3								0.91		0.43	0	3	6	20	4	se.	J. B. Newberry.
Winfield																				
Kansas.																				
Alden	Rice	1,684	3	48.9		74	18	23	10	41	1.72		0.75	0	6	13	8	9	s.	Geo. Klady.
Anthony	Harper	1,329	16	51.7		75	19	27	10	39	1.36	+ 0.11	0.63	0	7	8	10	12	sw.	R. H. Beebe.
Ashland	Clark	1,951	25	50.8	+ 6.9	80	11	28	11†	52	4.82	+ 3.62	2.16		10	15	5	10	s.	C. W. Carson.
Burlington	Coffey	1,010	20	52.2	+ 7.5	76	19	23	10	39	1.31	− 0.52	0.49	0	4	1	16	13	s.	O. E. Sanford.
Chanute	Neosho	940	9	54.8		79	6	26	10	38	2.78		1.02	0	7	2	21	7	se.	C. W. Brown.
Cimarron	Gray	2,700	1	47.8		77	11	20	23	44	1.82		0.91	0	5	16[d]	2[d]	8[d]	s.	C. C. Isely.
Coldwater	Comanche	2,090	16	49.9	+ 5.1	79	11	27	10	47	3.64	+ 2.50	1.84	0	8	16	7	7	s.	J. L. Stanley.
Columbus	Cherokee	898	23	53.8	+ 7.6	73	19	26	10	36	1.06	− 1.39	0.35	0	11	9	7	14	sw.	O. E. Skinner.
Coolidge	Hamilton	3,348	16	44.9	+ 4.7	76	11†	12	23	56	0.69	+ 0.11	0.32	0	3	17	5	8	nw.	W. R. Padley.
Cottonwood Falls	Chase	1,234	9	50.8		75	20	23	10	42	1.46		0.55	0	6	11	6	13	sw.	E. B. Greene.
Council Grove	Morris	1,234	4	51.4[c]		78	19	22	10	37	1.89		1.12	0	6	6[e]	9[e]	12[e]	sw.	J. P. Blackledge.
Cunningham	Kingman	1,680	29	49.6	+ 3.5	71	18†	25	10	35	1.99	+ 1.00	1.00	0	5	11	8	11	s.	W. H. Morton.
Dodge City	Ford	2,513	39	48.0	+ 7.5	79	11	26	23	43	2.14	+ 1.59	1.51	0	6	14	5	11	s.	U. S. Weather Bureau.
El Dorado	Butler	1,291	11	51.6		73	12†	24	10	38	2.14		0.80	0	8	8	11	11	s.	W. Y. Miller.
Ellinwood	Barton	1,790	38	48.8	+ 5.5	75	11	22	10	43	1.58	+ 0.61	0.48	0	11	9	12	9	ne.	Martin Musil.
Emporia	Lyon	1,138	32	52.2	+ 8.1	76	20	24	10	38	1.86	+ 0.49	0.67	0	7	12	7	11	sw.	Chas. Moss.
Eureka	Greenwood	1,079	17	48.2		75	12†	27	10	34	2.84	+ 1.12	1.60	0	7	12	8	10	s.	Mrs. T. C. Peffer.
Fall River	do	925	17	54.5	+ 8.0	77	19	26	10	40	2.50	+ 0.64	1.15	0	8	14	10	6	s.	J. McDaniel.
Fargo	Seward		3								2.61		1.45	0	5	19	6	5	s.	N. B. Swink.
Fredonia	Wilson	975	10	54.0		79	19	23	10	36	2.61		1.16	0	12	8	6	16	s.	B. W. Holmes.
Garden City	Finney	2,836	24	46.8	+ 3.8	78	11	15	23	48	1.19	+ 0.44	0.75	T.	4	15	7	8	s.	B. F. Stocks.
Greensburg	Kiowa	2,235	6	48.0		76	11	28	9†	45	3.07		1.68	0	7	16	2	12	s.	C. C. Raymond.
Grenola	Elk	1,116	25	53.2	+ 7.2	77	19	24	10	45	2.08	+ 0.35	0.92	0	7	9	6	15	s.	R. M. Lawyer.
Howard	do	1,112	6					26	10		2.46		1.00		4	13	6	11	s.	J. W. Eby.
Hugoton	Stevens	3,100	9	47.8		78	11	21	23	44	2.99		1.96	T.	6	17[a]	5[a]	7[a]	s.	E. R. Kimzey.
Hutchinson	Reno	1,535	23	48.8	+ 3.9	76	12	23	10	31	1.79	+ 0.67	1.38	0	4	14	2	14	ne.	Sheridan Ploughe.
Independence	Montgomery	800	39	55.4	+ 9.4	77	19	25	10	40	3.01	+ 1.09	1.32	0	11	9	5	16	s.	F. L. Kenoyer.
Iola	Allen	984	7	52.4	+ 9.4	77	19	25	10	37	1.67	+ 0.29	0.72	0	10	7	15	8	s.	U. S. Weather Bureau.
Irene	Hamilton	3,440	3	45.7		79	11	18	23	56	0.94		0.41	2.0	4	18	2	10	nw.	N. M. Herbig.
Jetmore	Hodgeman	2,268	12																	H. A. Mack.
Kingman	Kingman	1,504	5	51.0		74	19	26	10	38	1.53		0.59	0	5	9	11	10	sw.	B. B. Anawalt.
La Crosse	Rush	2,061	11			73	11†	20	10	47	1.92	+ 0.48	0.99	0	3	11[e]	6[e]	8[e]	se.	Rodney Torrey.
Lakin	Kearney	2,993	23	46.6	+ 4.6	73	17	20	23†	46	0.55	− 0.06	0.32	1.0	3	15	10	5	s.	C. H. Longstreth.
Larned	Pawnee	2,090	28	47.6		75	11	23	10	45	2.18	+ 1.13	1.41	0	8	14	5	11		H. H. Wolcott.
Lebo	Coffey	1,138	27	51.4	+ 8.2	75	19	24	10	34	1.55	− 0.16	0.62	0	6	10	5	15	s.	J. J. Bowman.
Le Roy	do	990	4								1.26		0.85	0	5	8	4	18	s.	F. W. Schmitt.
Liberal	Seward	2,843	6	50.2		77	6	27	23	41	3.22		1.60	T.	8	19	1	10	se.	Dr. R. T. Nichols.
Macksville	Stafford	2,032	24	48.2	+ 4.4	75	11	22	10	44	1.77	+ 0.75	0.81	0	6	14	8	8	s.	Mrs. Nelia Poling.
McPherson	McPherson	1,495	24	49.2	+ 5.6	72	18†	22	10	35	2.23	+ 1.07	0.98	T.	6	11	7	12	se.	Ed. F. Haberlein.
Madison	Greenwood	1,074	12																	Dr. J. M. Moore.
Marion	Marion	1,310	20	50.6	+ 6.1	74	20	24	10	35	1.98	+ 0.71	1.02	0	11	8	11	11	s.	Jerry Forney.
Medicine Lodge	Barber	1,259	20	52.0	+ 6.5	78	11	25	10	47	1.84	+ 0.68	1.29	0	7	10	11	9	s.	S. P. Garrison.
Minneola	Clark	2,558	1								2.54		1.57	0	5	13	8	9	sw.	A. P. Reece.
Mount Hope	Sedgwick	1,410	16								1.73	+ 0.40	1.00	0	5	10	4	16	s.	H. N. Renfrew.
Neosho Rapids	Lyon	1,092	8								2.35		1.15	0	6	12	1	17	se.	W. H. McMullen.
Ness City	Ness	2,260	20								1.24	+ 0.28	0.44		6					J. K. Barnd.
Newton	Harvey	1,454	16	49.7	+ 4.0	72	18	23	10	35	2.38	+ 1.01	1.10	0	9	7	13	10	s.	H. A. Brush.
Norwich	Kingman	1,496	17	51.2	+ 4.5	73	12†	25	10	35	1.20	− 0.31	0.52	0	10	13	3	14	s.	N. I. Farris.
Oswego	Labette	899	19	54.7	+ 7.2	79	21	29	7	36	1.60	− 0.48	0.72	0	8	9	7	14	sw.	Jas. M. Currigan.
Pittsburg	Crawford	934																		A. L. Scott.
Plains	Meade	2,766	3	47.2		76	11	25	23	44	3.07		1.68	0	4	19	7	4		E. J. Henning.
Pratt	Pratt	1,950	18	51.8[b]	+ 6.9	76	1	29	24	38	2.51	+ 1.21	1.32	0	5	7[h]	7[h]	8[h]	s.	T. J. Arnold.
Richfield	Morton		2	46.9	+ 4.2	79	11	20	23	49	1.68	+ 1.17	1.26	0.5	5					M. J. Allen.
Rome	Sumner	1,218	27	53.0	+ 7.6	76	12	25	10	39	1.73	+ 0.37	0.78	0	7	11	7	12	s.	D. M. Adams.
Santa Fe	Haskell	2,950	....	48.8		76	12	19	23	44	2.28		1.70	T.	4	15	11	4	s.	John J. Miller.
Sedan	Chautauqua	834	28	55.2	+ 8.7	76	12†	24	10	39	3.18	+ 1.61	1.60	0	6	11	13	6	s.	A. Y. Buckles.
Toronto	Woodson	1,040	16	50.8	+ 5.2	73	20	23	10	39	2.07	+ 0.19	1.30	0	6	10	5	15	s.	M. A. Webb.
Ulysses	Grant	3,050	22	47.4[a]	+ 4.9	78	11	25	10	49	0.74	+ 0.15	0.51	1.0	2					T. W. Marshall.
Walnut	Crawford	940	11	51.0	+ 4.2	73	13†	25	10	35	2.44	+ 0.29	1.33	0	6	6[e]	12[e]	9[e]	sw.	R. C. Harlan.
Wellington	Sumner	1,225	17	53.2	+ 9.2	86	21	24	10	38	1.55	+ 0.35	1.04	0	5	7	14	9	s.	E. O. G. Kelley.
Wichita	Sedgwick	1,377	26	51.2	+ 7.4	72	19	26	10	33	1.73	+ 0.55	1.15	0	10	6	6	18	s.	U. S. Weather Bureau
Winfield	Cowley	1,124	19	53.6	+ 7.2	75	12	20	10	38	2.27	+ 0.51	1.10	0	6	14	2	14	s.	M. B. Light.
Yates Center	Woodson	1,068	34	53.0	+ 7.6	78	19	23	9	42	1.41	− 0.28	0.98	0	5	7[a]	12[a]	10[a]	se.	J. W. Tipton.

TABLE 1.—*Climatological data for November, 1913. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oklahoma.																				
Ada	Pontotoc	1,001	5	55.6	.....	78	21	31	10†	42	5.12	.....	2.10	0	8	7	5	18	s.	H. P. Sugg.
Altus	Jackson	1,410	....	55.8	.....	79	12	34	9†	33	2.66	.....	1.28	0	11	9	2	19	s.	U. S. Weather Bureau.
Alva	Woods	1,350	8	51.4	.....	76	11†	27	10†	49	1.84	.....	1.00	0	6	10	2	18	sw.	S. A. Stech.
Apache	Caddo	1,255	3	56.4	.....	77	12†	30	10	34	4.34	.....	2.18	0	13	9	9	12	se.	G. D. Teeter.
Arapaho	Custer	1,575	19	54.6	+ 6.1	79	12†	31	10	32	3.89	+ 2.02	2.04	0	9	5	17	8	s.	P. H. Gallion.
Ardmore	Carter	872	11	59.4	+ 5.6	80	21	34	10	32	9.61	+ 6.80	4.08	0	13	10	4	16	s.	H. T. Nisbett.
Bartlesville	Washington	687	5	57.6	.....	78	12†	28	10	40	2.21	.....	0.55	0	11	10	5	15	s.	Dr. A. P. Owens.
Beaver	Beaver	2,500	16	49.2	+ 4.3	80	11	26	1†	49	2.14	+ 0.95	0.75	0	7	18	6	6	sw.	Elmer L. Fickel.
Buffalo	Harper	....	....	51.8	.....	87	18	26	1†	52	4.85	.....	3.12	0	6	18	4	8	s.	Dr. R. R. Anderson.
Cache	Comanche	1,350	7	54.6	.....	76	12†	27	9	44	5.78	.....	2.90	0	5	7	9	14	se.	Mrs. Frank Rush.
Calvin	Hughes	713	8	....	.....	....	....	....	....	....	3.24	.....	1.30	0	10	8	0	22	s.	Thomas Purcell.
Chandler	Lincoln	865	11	55.2	+ 3.7	80	14	31	10	39	2.26	+ 0.85	0.50	0	9	9	0	21	s.	Hiram C. Tuttle.
Chattanooga	Comanche	1,150	7	56.3	.....	80	13	30	10	35	3.95	.....	1.50	0	9	8	10	12	se.	Squire Humble.
Chickasha	Grady	1,091	11	56.4	+ 4.2	76	13†	30	10	37	3.38	+ 1.07	1.88	0	10	7	10	13	s.	Anna W. O'Neill.
Cleveland	Pawnee	800	11	57.1	+ 7.2	78	12	26	10	41	3.13	+ 0.34	0.63	0	11	9	14	7	sw.	Chas. C. Breed.
Cloud Chief	Washita	1,400	11	56.0	+ 5.5	77	13	31	10	30	4.82	+ 2.52	2.63	0	7	9	12	9	s.	J. P. Stutzman.
Durant	Bryan	643	11	59.6	+ 5.8	79	21†	32	10	40	3.72	+ 1.33	2.45	0	8	10	6	14	s.	Nelson Houk.
Eldorado	Jackson	1,456	6	56.7	.....	80	....	32	10	41[d]	2.67	.....	1.65	0	3	15	7	8	s.	J. T. Black.
El Reno	Canadian	1,400	21	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	Rose E. Walker.
Enid	Garfield	1,269	11	52.8	+ 3.4	75	11†	28	10	46	2.41	+ 0.23	0.85	0	7	16	11	3	s.	Uri B. Worcester.
Erick	Beckham	2,058	8	54.0	.....	81	....	32	....	40[e]	2.97	.....	1.34	0	6	14[e]	5[e]	8[e]	sw.	A. W. Hanes.
Eufaula	McIntosh	566	....	58.5	.....	79	21	26	10	44[b]	2.75	.....	0.89	0	7	9[b]	8[b]	11[b]	s.	R. Uhl Brown.
Fairland	Ottawa	839	13	56.6	+ 6.1	78	21	25	10	44	1.84	− 0.85	0.80	0	5	8	17	5	s.	C. W. Prier.
Fort Gibson	Muskogee	556	8	....	.....	....	....	....	....	....	3.40	.....	1.70	0	8	9	2	19	s.	John T. Welch.
Frederick	Tillman	1,293	6	57.6	.....	78	12†	34	9†	33	3.78	.....	1.75	0	10	6	11	13	se.	B. B. Bradley.
Geary	Blaine	1,546	1	55.0	.....	76	12†	31	10	28	4.00	.....	2.68	0	10	9	7	14	sw.	O. P. Ruth.
Goodwell	Texas	3,300	2	50.4	.....	78	10†	25	23	50	2.75	.....	1.90	0	6	19	0	11	n.	S. W. Black.
Guthrie	Logan	1,000	20	57.5	+ 6.8	85	17	28	10	37	3.15	+ 0.77	1.55	0	6	14	1	15	s.	S. E. Snyder.
Guymon	Texas	3,133	3	....	.....	....	....	....	....	....	3.43	.....	2.10	0	6	....	....	....	n.	A. L. Mordt.
Hammon	Roger Mills	....	....	51.9	.....	78	12†	30	9†	43	3.70	.....	1.35	0	10	10	9	11	se.	E. G. Commons.
Hartshorne	Pittsburg	700	14	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	Connie Hill.
Healdton	Carter	900	19	59.6	+ 6.3	80	13†	29	10	41	12.88	+10.43	3.75	0	9	11	9	10	se.	C. H. Heald.
Heavener	Leflore	....	....	59.4	.....	79	18	28	10	36	2.28	.....	1.77	0	3	16	8	6	s.	H. S. Bliss.
Helena	Alfalfa	1,396	5	56.4	.....	75	....	32	....	37[a]	1.98	.....	1.36	0	3	14	9	7	s.	E. C. Seegers.
Hennessey	Kingfisher	1,166	18	....	.....	....	....	....	....	....	2.80	+ 1.01	1.75	0	5	....	....	....	s.	Mrs. M. C. Parks.
Hobart	Kiowa	1,396	10	56.0	.....	79	12†	31	10	31	4.51	.....	1.81	0	8	9	9	12	s.	J. M. Pate.
Holdenville	Hughes	900	12	57.4	+ 4.8	77	13†	31	10	36	4.55	+ 1.92	1.80	0	10	10	10	10	s.	Eula L. Rutherford.
Hooker	Texas	3,038	7	48.4	.....	77	11	24	23	44	3.05	.....	1.70	0	8	13	1	16	s.	H. N. Kelly.
Hugo	Choctaw	....	....	61.0	.....	85	22	33	9	32	1.40	.....	1.40	0	1	5	10	15	e.	Dr. A. H. Davis.
Hurley	Cimarron	4,200	5	45.8	.....	74	11	20	24	43	0.50	.....	0.35	0	2	11	9	10	sw.	Dr. C. W. Meyers.
Idabel	McCurtain	474	4	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	W. S. Ray.
Jefferson	Grant	1,062	19	53.4	+ 6.7	77	12	27	10	35	1.94	+ 0.45	0.80	0	7	10	12	8	s.	T. F. Beck.
Kenton	Cimarron	4,000	12	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	Ralph H. Guy.
Kingfisher	Kingfisher	1,046	16	56.6	+ 6.2	80	13	30	9†	36	4.55	+ 2.44	2.86	0	8	10	8	12	s.	J. C. Cross.
Lawton	Comanche	1,111	....	52.0	.....	75	20	30	10†	28	4.60	.....	2.70	0	11	9	1	20	s.	Frank M. Head.
Lawtonka Lake	....do	....	....	....	.....	....	....	....	....	....	4.66	.....	2.35	0	8	8	6	16	s.	W. S. Kelser.
McAlester	Pittsburg	698	16	60.1	.....	80	21	31	10	37	4.19	+ 1.34	2.37	0	7	11	0	19	se.	Wm. Noble.
Mangum	Greer	1,585	20	58.2	+ 7.5	85	13†	32	10†	43	3.83	+ 2.20	1.50	0	8	13	3	14	se.	F. D. Dodson.
Marlow	Stephens	1,292	12	57.1	+ 5.2	79	18	29	1	38	3.01	+ 0.19	1.30	0	7	10	0	20	s.	Wm. B. Anthony.
Meeker	Lincoln	1,030	14	....	.....	....	....	....	....	....	5.03	+ 2.90	1.65	0	7	9	5	16	s.	Dr. J. H. Baugh.
Muskogee (1)	Muskogee	602	....	57.8	.....	78	19†	28	10	40	3.27	.....	1.80	0	9	6	6	18	n.	U. S. Weather Bureau.
Muskogee (2)	....do	614	14	59.2	+ 7.1	77	19†	36	....	24[a]	3.05	+ 0.59	1.63	0	6	8	5	17	e.	J. Harry Randall.
Mutual	Woodward	....	5	52.4	.....	77	12	29	9	34	2.60	.....	1.80	0	2	14	4	12	s.	Thos. Martin.
Neola	Caddo	1,500	7	56.0	.....	79	12	23	10	39	4.76	.....	3.45	0	5	10	9	11	s.	R. N. Schooling.
Newkirk	Kay	1,149	15	55.4	+ 6.8	77	....	27	10	35[d]	1.80	+ 0.05	1.15	0	3	8	10	12	s.	H. P. Albright & Co.
Norman	Cleveland	1,171	18	57.8	+ 7.1	76	13	.....	10	31[d]	5.63	+ 3.09	3.30	0	13	6	15	9	s.	S. E. Boyd.
North Muskogee	Muskogee	....	....	....	.....	....	....	....	....	....	3.25	.....	1.08	0	11	6	2	22	s.	J. M. Cantrel.
Oakwood	Dewey	1,854	3	52.6	.....	75	12†	26	10	32	3.83	.....	2.00	0	7	8	12	10	s.	Dr. E. E. Lawson.
Okeene	Blaine	1,194	8	57.2	.....	83	21	30	10	35	3.52	.....	2.62	0	7	14	10	6	s.	Dr. L. H. Murdoch.
Okemah	Okfuskee	....	....	60.0	.....	77	21	27	11	44	4.15	.....	1.50	0	5	10	3	17	s.	S. F. Smith.
Oklahoma	Oklahoma	1,247	23	55.8	+ 7.9	76	13	32	10	29	3.71	+ 1.46	1.78	0	14	6	7	17	s.	U. S. Weather Bureau.
Okmulgee	Okmulgee	752	8	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	J. L. Maynard.
Pauls Valley	Garvin	880	12	58.6	+ 6.0	80	13	30	10	38	7.62	+ 5.23	2.05	0	11	10	18	2	s.	A. M. Foss.
Pawhuska	Osage	918	12	56.6	+ 8.5	83	11	29	10†	44	2.75	+ 0.48	0.76	0	6	13	14	3	n.	R. C. Block.
Perry	Noble	920	14	54.6	+ 4.5	75	19†	28	10	26	2.54	+ 0.36	1.00	0	6	8	15	7	s.	S. E. Laird.
Rankin	Roger Mills	2,200	9	50.6	.....	80	13	30	8†	39	3.12	.....	1.30	0	8	12	10	8	sw.	Roy Kagay.
Ravia	Johnston	796	9	59.2	.....	82	10	30	10	52	4.06	.....	1.60	0	8	8	3	19	s.	R. G. Guptill.
Sac and Fox Agency	Lincoln	900	19	....	.....	78	13	....	....	....	2.67	+ 0.61	0.58	0	11	5	13	12	n.	Thos. Myers.
Shawnee	Pottawatomie	1,041	11	54.8	+ 3.1	77	12†	28	10	42	4.39	+ 2.69	1.69	0	14	6	16	8	sw.	Mrs. Kate Chatman.
Snyder	Kiowa	1,356	6	56.6	.....	78	13	32	10	31	4.47	.....	1.98	0	7	....	....	....	se.	Mrs. H. M. Stevenson.
Stillwater	Payne	880	20	54.6	+ 5.9	78	13	28	10	41	2.96	+ 0.82	1.28	0	10	7	9	14	s.	E. Tourtellotte.
Tahlequah	Cherokee	790	....	55.8	.....	79	19	23	10	43	2.52	.....	1.12	0	9	12	6	12	nw.	G. P. Hardy.
Tulsa	Tulsa	700	24	57.2	.....	77	21	28	10	39	2.03	− 0.10	0.42	0	12	11	3	16	s.	Dr. H. M. Hutchinson.
Vinita	Craig	698	9	56.0	.....	77	21	26	10†	44	3.10	.....	1.75	0	7	13	0	17	s.	R. E. Moss.
Wagoner	Wagoner	588	16	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	Moro Hatfield.
Waukomis	Garfield	1,258	16	54.1	+ 4.1	76	12	28	10	41	2.47	+ 0.69	1.38	0	7	11	12	7	nw.	R. C. Shades.
Waurika	Jefferson	988	2	59.4	.....	80	19	35	9†	36	7.94	.....	3.80	0	14	8	6	16	s.	B. A. Swindler.
Weatherford	Custer	1,639	11	53.6	+ 4.3	77	13	29	10	40	4.74	+ 2.77	1.60	0	8	8	3	19	s.	Eugene Forbes.
Webbers Falls	Muskogee	479	14	57.8	+ 7.7	80	18†	33	10	31	2.65	− 0.28	1.25	0	4	0	24	6	e.	B. D. Boulineau.
Whiteagle	Kay	945	9	55.1	.....	75	19†	27	10	35	3.30	.....	1.50	0	5	9	16	5	s.	Jessie W. Smith.
Woodward	Woodward	1,900	10	51.2	.....	79	11†	25	9	46	3.50	.....	1.30	0	10	14	5	11	sw.	Mrs. Ida C. Baird.
Wyandotte	Ottawa	....	....	....	.....	....	....	....	....	....	2.90	.....	1.50	0	3	10[b]	0[b]	18[b]	s.	James J. Bruton.
Missouri.																				
Belle	Maries	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	....	....	....	....	A. J. Wofford.
Birchtree	Shannon	1,200	21	52.4[c]	+ 6.5	73	22	21	11	33	3.49	+ 0.69	0.73	0	8	11[a]	11[a]	7[a]	s.	V. H. Kirkendall.
Cardwell	Dunklin	....	3	55.5[c]	.....	78	18†	22	11	44	1.41	.....	0.75	0	2	12[c]	8[c]	3[c]	s.	E. M. Perry.
Caruthersville	Pemiscot	....	23	56.7	+ 7.8	80	22	22	11	44	1.30	− 3.15	0.48	0	5	17	1	12	s.	H. E. Averill.
Cassville	Barry	....	3	53.7	.....	75	21	20	11	48	1.37	.....	0.90	0	5	21	4	5	s.	Mrs. Zuma Bloomer.
Dean	McDonald	....	15	54.6	+ 5.4	79	21	19	10	47	2.64	− 0.37	0.83	0	11	16	5	9	s.	H. E. Dean
Doniphan	Ripley	440	10	53.2	+ 5.5	74	21	21	11	39	3.68	+ 0.61	1.04	0	9	10[a]	12[a]	7[a]	s.	W. W. Martin.
Fruit City	Reynolds	1,150	1	53.4	.....	74	24	23	11	37	3.19	.....	0.80	0	8	10	12	8	sw.	R. C. Walton.
Gano	Dent	....	11	52.4	+ 5.9	78	21	20	11	40	2.00	− 0.38	0.54	0	8	11	7	12	s.	A. C. Leech.
Goodland	Iron	900	9	50.8	.....	75	12†	11	11	44	1.67	.....	0.66	0	5	7	8	15	s.	F. M. Adams.
Hollister	Taney	850	4	54.2	.....	78	20	30	10†	38	3.35	.....	1.05	0	7	17	0	13	sw.	W. P. Chapmann.

TABLE 1.—*Climatological data for November, 1913. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Missouri—Continued.																				
Ironton	Iron	925	36	51.4	+ 8.0	76	22	18	1†	42	2.45	− 1.52	0.78	T.	9	2	12	16	s.	W. H. Delano.
Jackson	Cape Girardeau	458	23	53.1	+ 7.2	78	20	20	11	41	3.59	+ 0.10	1.15	0	8	9	6	15	n.	L. M. Bean.
Joplin	Jasper	979	35	58.8	+ 9.2	78	19†	27	10	43	2.90	− 0.23	1.10	0	5	10	5	15	s.	Joplin High School.
Koshkonong	Oregon	911	13	54.3	+ 5.4	75	18	27	11	30	4.46	+ 1.33	0.88	0	9	7	13	10	se.	J. W. Hitt.
Lamar	Barton	964	32	54.0	+ 7.7	76	21	23	10	45	1.50	− 0.64	0.37	0	6	8	8	14	sw.	E. H. Adams.
Marble Hill	Bollinger	420	23	.....	.....	78	20	19	11	....	4.58	+ 1.37	2.20	0	4	19	6	5	s.	A. F. Hendricks.
Mountaingrove	Wright	1,490	15	52.7	+ 6.1	73	18†	21	11	35	2.28	+ 0.12	0.70	0	7	8	8	14	s.	Mo. Fruit Exp. Sta.
Mount Vernon	Lawrence	1,480	36	51.6g	+ 4.6	....	....	24	11	44	3.74	+ 0.80	1.60	0	5	9g	6g	8g	se.	J. R. White & Son.
Neosho	Newton	1,023	31	55.7	+ 8.8	78	21	23	11	45	1.94	− 1.09	0.79	0	7	10	10	10	sw.	W. O. Buck.
New Madrid	New Madrid	285	20	.....	.....	.....	.....	.....	.....	.....	1.57	− 2.75e	0.56	0	6	9	5	16	se.	Miss Josie Smith.
Oakfield	Franklin	793	22	52.6	+ 7.0	78	21	21	11	33	3.53	+ 0.80	2.20	0	9	7	10	13	s.	E. E. Steines.
Rolla	Phelps	1,139	33	52.7	+ 9.5	76	21	20	10	36	1.75	− 0.79	0.50	0	6	11	9	10	s.	Prof. Elmo G. Harris.
Springfiled	Greene	1,350	27	53.0	+ 8.6	75	21	25	10	30	1.59	− 1.05	0.70	0	7	8	7	15	s.	U. S. Weather Bureau.
Kentucky.																				
Blandville	Ballard	445	32	54.4	+ 7.8	77	22	23	11	35	2.49	− 1.97	0.67	T.	10	11	6	13	se.	E. W. Horr.
Tennessee.																				
Arlington	Shelby	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Thomas B. Etheridge.
Bolivar	Hardeman	450	30	52.5	+ 3.1	77	22	21	11	37	1.09	− 2.96	0.43	0	6	15	1	14	s.	Miss Mary A. Smith.
Brownsville	Haywood	361	31	54.5	+ 4.2	76	22	25	11	46	1.26	− 3.16	0.54	0	4	20	0	10	sw.	Robert Y. Moses.
Covington	Tipton	311	30	55.4	+ 5.4	77	22	24	11	33	1.65	− 2.85	1.05	0	4	19	0	11	s.	James S. Ruffin.
Dyersburg	Dyer	310	30	58.4	+ 8.9	78	22	24	11	39	1.35	− 3.56	0.75	0	3	16	0	14	se.	Miss Martha A. Sinclair.
Jackson	Madison	450	23	55.8	+ 5.2	76	15†	22	11	43	1.30	− 2.69	0.48	0	5	15	10	5	.....	Shelby A. Robert.
Kenton	Obion	325	11	54.6	+ 4.6	77	20†	19	11	42	1.58	− 3.53	0.50	0	5	13	8	9	s.	George S. Martin.
Memphis	Shelby	409	42	57.6	+ 6.2	78	22	34	11	26	1.64	− 2.95	0.91	0	4	10	7	13	s.	U. S. Weather Bureau.
Milan	Gibson	440	31	52.8	+ 4.7	77	21	22	11	48	0.61	− 4.34	0.20	0	5	12	6	12	s.	Orlando F. Cantwell.
Trenton	do	345	33	55.4	+ 7.4	79	22	20	11	41	0.94	− 3.85	0.49	0	4	17	7	6	s.	F. L. Dennison.
Union City	Obion	360	18	53.2	+ 3.5	78	21†	21	11	45	1.70	− 3.18	0.61	0	6	10	14	6	s.	J. R. Oliver.
Arkansas.																				
Alicia	Lawrence	254	9	56.0	.....	76	15†	24	11	39	2.92	.....	1.45	0	3	12	14	4	s.	McCullough & Guelck.
Amity	Clark	250	21	57.0	+ 5.5	82	22	28	12	44	4.18	+ 0.10	2.70	0	5	15	6	9	w.	J. W. Campbell.
Arkadelphia	do	250	7	.....	.....	.....	.....	.....	.....	.....	1.19	.....	0.94	0	5	.....	.....	.....	.....	F. J. Carpenter.
Arkansas City	Desha	145	28	.....	.....	.....	.....	.....	.....	.....	3.84	+ 0.08	2.50	0	4	.....	.....	.....	.....	W. C. Blundell.
Batesville	Independence	271	15	.....	.....	.....	.....	.....	.....	.....	3.39	− 0.20	1.12	0	6	.....	.....	.....	.....	Lelia I. Teter.
Bee Branch	Van Buren	.....	22	56.4	+ 5.3	80	21	25	11	37	2.30	− 1.02	0.55	0	6	11	3	16	.....	J. E. Scanlan.
Bentonville	Benton	1,303	8	54.9	+ 8.2	74	21	25	10	40	2.46	− 0.53	1.17	0	9	6	8	16	s.	U. S. Weather Bureau.
Bergman	Boone	1,324	15	55.0	+ 9.4	78	12	25	10†	40	1.82	− 0.92	0.64	0	8	13	7	10	se.	John T. Maxey.
Black Rock	Lawrence	259	12	.....	.....	.....	.....	.....	.....	.....	2.68	− 2.21	1.04	0	6	.....	.....	.....	.....	S. J. Howe.
Brinkley	Monroe	226	24	58.1	+ 7.3	80	21	24	11	42	2.79	− 2.11	1.23	0	5	12	11	7	s.	H. L. Whitson.
Calico Rock	Izard	361	10	.....	.....	.....	.....	.....	.....	.....	1.90	.....	1.20	0	3	.....	.....	.....	.....	J. W. Wray.
Camden	Ouachita	158	28	60.6	+ 8.3	83	18	27	11	46	1.55	− 2.70	0.83	0	3	.....	.....	.....	.....	R. H. Quarterman.
Centerpoint	Howard	470	14	60.5	+ 5.3	82	22	31	9†	38	3.50	− 0.36	2.30	0	5	7	3	20	se.	J. M. Huddleston.
Clarendon	Monroe	171	9	.....	.....	.....	.....	.....	.....	.....	2.40	.....	0.93	0	5	.....	.....	.....	.....	Mrs. B. E. Bishop.
Conway	Faulkner	309	30	55.8	+ 5.9	79	22	27	11	40	2.80	− 1.47	0.86	0	7	14	6	10	e.	G. H. Burr.
Corning	Clay	293	21	.....	.....	.....	.....	.....	.....	.....	2.94	− 0.29	0.99	0	10	7	9	14	s.	Jacob Brobst.
Dardanelle	Yell	330	28	57.0	.....	80	15	27	11	41	1.92	− 1.60	0.65	0	7	.....	.....	.....	.....	A. Bernard.
Dodd City	Marion	1,175	32	56.1d	+ 8.5	75	18†	26	10	34d	2.41	− 0.78	1.10	0	7	.....	.....	.....	.....	Neal Dodd.
Dumas	Desha	.....	2	.....	.....	.....	.....	.....	.....	.....	2.25	.....	1.30	0	2	17	12	1	.....	Lawrence Waterman.
Dutton	Madison	.....	12	53.8	+ 5.3	73	18	22	11	38	5.16	+ 1.80	1.53	0	7	8	6	16	s.	J. M. Ricketts.
Eldorado	Union	265	9	60.0	.....	81	18†	30	10	41	2.05	.....	0.95	0	3	.....	.....	.....	.....	Jeff J. Babb.
England	Lonoke	229	7	58.3	.....	79	21	25	11	39a	2.30	.....	0.80	0	5	.....	.....	.....	.....	J. C. Chenault.
Eureka Springs	Carroll	1,465	12	56.6	+ 6.8	78	18	25	10†	46	3.26	+ 0.63	1.61	0	6	5	12	13	sw.	George W. Nichoalds.
Fayetteville	Washington	1,451	23	55.8	+ 7.4	76	21	21	11	46	3.93	+ 0.74	1.07	0	10	8	14	8	sw.	University of Arkansas.
Fordyce	Dallas	.....	3	59.2	.....	80	21	30	11	36	1.10	.....	0.60	0	2	6	9	15	n.	J. B. Atkinson.
Fort Smith	Sebastian	481	32	58.3	+ 8.4	79	18	32	10	33	2.15	− 1.13	0.77	0	9	7	3	20	e.	U. S. Weather Bureau.
Fulton	Hempstead	264	27	.....	.....	.....	.....	.....	.....	.....	1.68	− 1.84	1.06	0	4	.....	.....	.....	.....	B. C. Logan.
Georgetown	White	200	2	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.63	0	5	.....	.....	.....	.....	Wm. N. Harris.
Hardy	Sharp	643	17	54.7	+ 5.0	76	18	23	11	38	3.90	+ 0.96	1.30	4.8	9	3	12	15	se.	C. A. Caywood.
Helena	Phillips	182	41	59.8	+ 7.8	78	14	40	1	26	2.78	− 1.95	2.30	0	3	.....	.....	.....	.....	W. Scharz.
Hot Springs	Garland	600	23	60.4	+ 9.1	75	25	33	4	38	4.49	− 0.17	1.98	0	6	12	12	6	sw.	Army and Navy Gen. Hosp.
Huttig	Union	85	7	60.0	.....	82	18	32	10	40b	2.05	.....	1.20	0	2	.....	.....	.....	.....	C. A. Berry.
Jonesboro	Craighead	345	17	56.4	+ 5.0	80	15†	25	11	46	0.86	− 2.63	0.40	0	3	8	18	4	se.	Benedictine Sisters.
Junction	Union	.....	19	59.2	+ 5.9	79	18†	29	10	36	2.20	− 1.84	1.40	0	2	22	4	4	sw.	J. A. Lowderback.
Lake Farm	Jefferson	195	6	58.2	.....	80	21	23	11	41	1.74	.....	0.84	0	3	.....	.....	.....	.....	G. L. Spellman.
Lewisville	Lafayette	262	10	61.6	.....	85	18	28	10	47	0.75	.....	0.45	0	2	13	5	12	.....	F. W. Youmans.
Little Rock	Pulaski	357	35	58.2	+ 6.7	77	21	34	10	29	3.05	− 1.54	1.68	0	6	9	9	12	s.	U. S. Weather Bureau.
Lutherville	Johnson	775	15	56.2	+ 5.7	76	18	27	11	34	2.60	− 1.28	0.79	0	10	6	15	9	sw.	W. R. Hentschel.
Malvern	Hot Spring	277	25	58.2	+ 6.3	79	15†	28	11	41	3.43	− 1.36	1.10	0	5	.....	.....	.....	.....	Miss L. C. Smith.
Mammoth Spring	Fulton	512	9	54.2	.....	77	18	21	11	39	1.89	.....	0.50	0	7	9	14	7	.....	F. Wallick.
Marked Tree	Poinsett	229	9	.....	.....	.....	.....	.....	.....	.....	1.80	.....	1.17	0	2	8	3	19	.....	Chapman & Dewey Lumber Co.
Mena	Polk	1,284	23	57.8	+ 6.2	77	18	32	10	35	4.06	+ 0.46	2.00	0	8	11	14	5	n.	V. W. St. John.
Newport	Jackson	231	28	56.4	+ 6.1	79	21	25	11	51	2.27	− 2.60	0.78	0	6	.....	.....	.....	.....	Wiley W. McMinn.
Pine Bluff	Jefferson	215	25	57.9	+ 5.1	81	21	28	11†	49	1.55	− 2.54	0.46	0	5	.....	.....	.....	ne.	J. H. Hudson.
Pocahontas	Randolph	.....	20	55.8	+ 7.7	78	7	24	11	40	3.34	− 0.30	0.80	0	8	8	13	9	.....	Benedictine Sisters.
Pond	Benton	1,250	16	55.0	+ 6.8	75	18†	20	9	42	2.39	− 0.42	1.07	0	5	.....	.....	.....	sw.	A. F. Stevens.
Portland	Ashley	122	5	60.1	.....	84	21	28	11	49	3.95	.....	1.93	0	3	.....	.....	.....	.....	T. A. Corson.
Prescott	Nevada	327	26	59.0	+ 6.1	82	18	29	10†	47	2.27	− 0.81	1.25	0	6	.....	.....	.....	.....	Mrs. G. Cummings.
Princeton	Dallas	287	8	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0	0	.....	.....	.....	.....	James Stitt.
Rison	Cleveland	243	14	.....	.....	.....	.....	.....	.....	.....	1.12	− 2.52	1.12	0	1	.....	.....	.....	.....	L. E. Tisdale.
Rogers	Benton	1,385	22	56.4	+ 8.4	76	21	25	10†	38	2.21	− 0.71	0.95	0	9	8	6	16	s.	Carl A. Stark.
Sheridan	Grant	.....	1	.....	.....	.....	.....	.....	.....	.....	2.60	.....	1.20	0	4	.....	.....	.....	.....	S. E. Ashcraft.
Springbank	Miller	182	5	.....	.....	.....	.....	.....	.....	.....	1.23	.....	0.80	0	4	.....	.....	.....	.....	G. Field.
Stuttgart	Arkansas	228	26	58.4	+ 7.6	83	19	28	11	42	1.39	− 3.16	0.70	0	4	16	6	8	s.	H. A. Buerkle.
Subiaco	Logan	1,050	17	58.6	+ 6.7	78	21	30	10†	33	2.37	− 0.69	0.96	0	8	19	8	3	ne.	New Subiaco Abbey.
Swain	Newton	2,300	3	53.2	.....	69	7	22	9	36	3.84	.....	2.04	0	10	5	5	20	s.	George Paxton.
Texarkana	Miller	332	26	62.6	+ 7.7	84	22	27	10	42	1.02	− 2.18	1.02	0	5	.....	.....	.....	.....	H. S. Brashear.
Warren	Bradley	304	19	59.6	+ 6.2	81	18	30	11	45	0.79	− 3.00	0.57	0	2	.....	.....	.....	.....	R. R. Lusk.
Whitecliffs	Little River	206	8	.....	.....	.....	.....	.....	.....	.....	1.07	.....	0.54	0	4	.....	.....	.....	.....	F. B. Lane.
Wiggs	Garland	.....	20	56.9	+ 4.6	80	22	24	11	41	3.94	+ 0.03	1.60	0	6	8	14	8	sw.	S. D. Jester.
Wynne	Cross	250	6	57.2	.....	80	21	24	11	44	1.43	.....	0.48	0	6	.....	.....	.....	.....	John Seals.

TABLE 1.—*Climatological data for November, 1913. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Mississippi.																			
Anguilla	Sharkey	107	5	60.4	.....	83	22	26	10†	40	1.50	.....	0.64	0	3	19	8	3	se.	E. W. Cook.
Austin	Tunica	200	17	58.0	+ 5.7	81	22	23	11	42	2.81	− 2.77	1.89	0	5	20	6	4	.....	H. J. Irvine.
Batesville	Panola	230	26	57.4	+ 6.0	81	22	24	11	49	1.01	− 2.70	0.40	0	3	19	4	7	n.	J. M. Cox.
Big Creek	Calhoun		2																	J. P. Havens.
Canton	Madison	228	23	60.7	+ 5.1	84	23	26	11	42	1.94	− 1.15	0.93	0	4	23	5	2	se.	Dr. G. W. Smith-Vaniz.
Charleston	Tallahatchie		3	58.4	.....	82	22	23	11	41	1.14	.....	0.40	0	4	12	10	8	s.	W. B. Burke.
Clarksdale	Coahoma	177	6	58.1	.....	85	18	25	11	50	2.65	.....	2.00	0	3	8	2	20	s.	A. C. Tuttle.
Cleveland	Bolivar	160	1	.....	.....	.....	.....	.....	.....	.....	2.47	.....	1.00	0	5	23	0	7	.....	W. W. Boone.
Coffeeville	Yalobusha	241	4	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.56	0	5	15	15	0	e.	C. K. Bailey.
Corinth	Alcorn	470	25	54.4	+ 3.9	76	20	22	11	47	1.13	− 2.90	0.64	0	5	13	3	14	se.	M. A. Candler.
Crenshaw	Panola	187	4	.....	.....	.....	.....	.....	.....	.....	2.30	.....	1.60	0	4	19	6	5	s.	Rodgers Woollard.
Duck Hill	Montgomery		14	56.6	+ 2.4	79	22	24	11	42d	1.48	− 1.54	1.48	0	1	.....	.....	.....	s.	W. H. Eskridge.
Edwards	Hinds	222	26	61.6	+ 5.0	85	23	28	11	37	4.05	+ 0.80	2.70	0	3	24	5	1	s.	E. F. Farr.
Fayette	Jefferson	270	12	61.0	+ 4.9	81	7†	25	10	44	2.79	− 1.58	1.85	0	2	.....	.....	.....	s.	T. L. Darden.
Greenville	Washington	126	26	60.6	+ 6.3	85	22	29	11	44	2.29	− 1.40	1.88	0	4	15	1	14	ne.	M. G. Harbison.
Greenwood	Leflore	140	13	58.4	+ 4.5	81	20†	26	11	46	1.81	− 1.68	1.08	0	3	17	8	5	s.	J. H. Stephen.
Grenada	Grenada	194	4	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.30	0	2	22	3	5	.....	W. F. Hallam.
Hernando	De Soto	391	25	56.8	+ 5.0	81	21	29	11	41	1.70	− 1.96	1.00	0	4	13	7	10	s.	W. F. Wood.
Hickory Flat	Benton	435	4	.....	.....	.....	.....	.....	.....	.....	1.20	.....	0.95	0	2	20	9	1	s.	H. Powell.
Holly Bluff	Yazoo		5	.....	.....	.....	.....	.....	.....	.....	2.28	.....	.....	0	3	24	3	3	.....	W. C. Sharbrough.
Holly Springs	Marshall	600	26	55.2	+ 5.0	76	21†	28	11	41	1.02	− 2.77	0.48	0	5	15	2	13	se.	L. B. Mosby.
Kosciusko	Attala	430	23	56.9	+ 3.0	81	23	23	11	45	1.57	− 1.40	1.05	0	3	24	5	1	e.	E. L. Lucas.
Malone	Marshall		4	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.26	0	4	.....	.....	.....	.....	M. J. Wilkins.
Moorhead	Sunflower	117	...	58.0	.....	81	22	22	11	42	1.71	.....	0.60	0	3	14	13	3	.....	H. S. Gove.
Natchez	Adams	206	25	62.6	+ 3.5	82	23	27	10	38	2.83	− 1.19	1.61	0	2	5	3	22	s.	Catherine Garrity.
Pontotoc	Pontotoc	475	24	56.8	+ 4.3	76	21†	26	11	35	1.42	− 2.02	0.75	0	3	14	16	0	se.	Dr. C. W. Bolton.
Port Gibson	Claiborne	116	25	59.2	+ 3.3	81	21	26	10	44	1.97	− 1.59	1.28	0	2	13	2	15	se.	H. H. Crisler.
Rosedale	Bolivar	143	5	57.6	.....	82	7†	27	11	45	3.25	.....	2.10	0	4	10	1	19	sw.	T. J. Murray.
Shoccoe	Madison		10	60.6	+ 5.0	84	22	29	11	39	3.25	+ 1.06	2.60	0	3	24	4	2	se.	J. C. Pitchford.
Suffolk	Franklin		12	62.6	+ 3.2	80	7†	31	11	38	1.79	− 1.65	1.09	0	2	15	13	2	se.	Prof. Geo. H. Kent.
Swan Lake	Tallahatchie	148	8	.....	.....	.....	.....	.....	.....	.....	1.36	.....	0.86	0	3	17	9	4	.....	Dr. W. R. Harris.
Tchula	Holmes	130	8	60.4	.....	82	19†	24	11	43	2.46	.....	1.41	0	2	.....	.....	.....	s.	Dr. M. P. Winkler.
University	Lafayette	502	20	56.1	+ 3.4	77	22	27	11	39	1.25	− 2.60	0.60	0	4	22	2	6	s.	Prof. J. H. Dorroh.
Utica	Hinds	287	9	61.9	.....	83	18†	27	10	43	2.95	.....	1.40	0	3	10	17	3	se.	Dr. J. B. Dudley.
Vicksburg	Warren	247	42	62.8	+ 6.9	81	23	35	10	31	3.86	− 0.33	3.21	0	2	13	15	2	se.	U. S. Weather Bureau.
Water Valley	Yalobusha	300	24	58.9	+ 6.0	81	22	25	11	38	1.22	− 2.37	0.67	0	3	13	16	1	sw.	Miss Loula Erikson.
Woodville	Wilkinson	560	20	63.8	+ 5.8	83	23	33	10	39	3.13	− 0.63	1.82	0	3	27	2	1	se.	James E. Lee.
Yazoo City	Yazoo	116	19	60.2	+ 5.2	83	22	25	11	42	3.19	+ 0.21	1.65	0	2	22	3	5	se.	W. H. Courts.
Louisiana.																				
Abbeville	Vermilion	18	25	62.2	+ 1.3	81	16	36	10	31	2.12	− 1.31	1.25	0	4	20	5	5	se.	Hon. C. J. Edwards.
Alexandria	Rapides	77	25	60.8	+ 3.8	81	16	30	10†	40	3.46	− 0.83	1.53	0	4	16	6	8	s.	Miss Nellie Graham.
Amite	Tangipahoa	130	25	62.0	+ 3.5	82	7	26	10	40	3.20	− 0.14	2.20	0	2	9	14	7	n.	Miss L. M. Wentz.
Angola	West Feliciana	.....	.....	64.8	.....	90	16	27	10	48	2.00	.....	2.00	0	1	28	0	2	se.	Capt. John Brogan.
Antioch	Claiborne	.....	1	61.1*	.....	82	18	33	10	41*	2.41	.....	1.61	0	2	25	0	5	s.	W. L. Anglin.
Avoca Island	St. Mary	9	2	.....	.....	.....	.....	.....	.....	.....	3.03	.....	2.40	0	5	25	4	1	.....	J. N. Pharr & Sons.
Baton Rouge	E. Baton Rouge	60	25	65.6	+ 6.0	87	17	33	10	41	2.21	− 2.49	1.16	0	4	14	2	14	se.	Elmo M. Bott.
Burnside	Ascension	20	13	64.8	+ 4.3	85	17	29	10	40a	1.42	− 1.01	1.20	0	3	14	14	2	e.	C. S. McFarland.
Burrwood	Plaquemines	1	25	66.4	+ 0.3	80	16	49	10	22	2.28	− 0.24	1.17	0	4	20	6	4	ne.	Graham Myers.
Cades	St. Martin	.....	3	66.4	.....	86	21	33	10	34	3.63	.....	2.58	0	2	26	3	1	s.	C. E. Smedes.
Calhoun	Ouachita	180	25	61.4	+ 6.5	82	23	30	11	42	1.72	− 2.12	1.05	0	2	13	13	4	s.	North La. Exp. Station.
Cameron	Cameron	6	20	61.8	− 0.2	79	4†	32	10	37*	1.45	− 2.46	0.94	0	4	17	9	4	e	Adolph Bruckert.
Carrollton	Orleans	7	2	64.6	.....	82	7†	35	11	36	.....	.....	.....	0	...	23	2	5	.....	Loyola College.
Chenyville	Rapides	67	25	61.4	+ 3.8	84	15†	28	10	43	3.25	− 0.66	2.25	0	2	12	2	16	s.	Walter I. Tanner.
Cinclare	W. Baton Rouge	.....	3	64.0	.....	83	16	32	9	40	2.00	.....	1.20	0	2	10	6	14	se.	Cinclare Central Factory.
Clinton	East Feliciana	113	25	63.6	+ 5.2	82	17	29	10	41b	2.20	− 0.75	1.26	0	2	12	2	16	n.	John A. White.
Collinston	Morehouse	65	12	61.4	+ 5.8	89	19	29	10	40	4.97	+ 1.29	4.00	0	3	10	17	3	s.	J. B. Beily.
Covington	St. Tammany	39	21	61.9	+ 5.9	83	7	29	10†	42	3.97	+ 1.18	1.93	0	4	15	6	9	e.	Cecile P. Champagne.
Dodson	Winn	.....	4	64.9	.....	83	18	28	10	42	2.21	.....	1.15	0	3	12	13	5	s.	J. P. Lucas.
Donaldsonville	Ascension	33	25	67.4	+ 6.0	90	23	35	10	40	2.20	− 1.29	2.00	0	2	26	0	4	e.	John F. Park.
Dutchtown	do	.....	2	.....	.....	.....	.....	.....	.....	.....	1.84	.....	1.42	0	2	17	12	1	.....	Picard & Geismar (Ltd.).
Farmerville	Union	177	25	59.4	+ 4.3	80	18	31	9†	41	1.17	− 2.95	0.66	0	3	9	4	17	s.	W. P. Chandler.
Florence	Vermilion	.....	1	65.3	.....	83	23	36	9	28	1.90	.....	1.45	0	3	18	11	1	se.	White Lake Land Co.
Franklin	St. Mary	10	21	66.0	+ 5.0	86	15	33	10	40	2.71	− 0.82	2.50	0	5	9	2	19	ne.	Miss J. M. Bonney.
Franklinton	Washington	.....	3	69.6	.....	89	18	27	10	41	2.93	.....	1.70	0	2	18	0	12	se.	Ogden C. Doremus.
Grand Cane	De Soto	302	19	55.7	− 0.8	81	22	20	10	50	3.99	− 0.24	2.78	0	2	13	6	11	e.	Oakley Provost.
Grand Coteau	St. Landry	93	25	66.1	+ 6.1	88	17	35	10	36	2.80	− 0.76	2.20	0	3	19	8	3	e.	St. Charles College.
Hammond	Tangipahoa	44	21	62.8	+ 4.0	84	23	27	10	40	3.03	+ 0.02	1.50	0	3	23	4	3	se.	C. C. Carr.
Houma	Terrebonne	.....	25	63.8	+ 3.0	86	27	30	9	38	3.75	+ 1.07	2.05	0	6	16	8	6	ne.	Prof. John M. Foote.
Jeanerette	Iberia	.....	15	70.5	.....	88	17	36	10	35	2.00	.....	2.00	0	1	30	0	0	se.	Capt. E. B. Trotman.
Jennings	Calcasieu	30	16	64.7	+ 4.5	84	6†	33	10†	40	2.47	− 0.83	1.46	0	4	6	22	2	se.	J. F. Buch.
Laark	Morehouse	.....	1	59.8	.....	86	21†	24	9†	46	3.00	.....	2.10	0	2	17	7	6	.....	P. M. Donley.
Lafayette	Lafayette	36	25	65.9	+ 5.9	90	16†	33	10	36	2.23	− 1.22	1.61	0	3	10	13	7	e.	J. J. Davidson.
Lake Charles	Calcasieu	22	25	64.2	+ 4.7	89	19	30	8	51	4.05	− 0.41	2.15	0	2	22	1	7	s.	George Boudreaux.
Lakeside	Cameron	9	12	62.8	+ 1.0	78	6†	42	10†	25	1.88	− 1.76	1.70	0	2	28	0	2	s.	Miss L. J. Nunemacher.
Lawrence	Plaquemines	6	22	64.0	+ 2.2	81	7	34	10	32	2.36	− 0.23	1.53	0	2	18	9	3	e.	Hon. H. C. Warmoth.
Liberty Hill	Bienville	.....	25	63.6	+ 7.0	85	18	30	10	47	1.97	− 2.43	1.22	0	2	21	6	3	s.	Dr. E. A. Crawford.
Logansport	De Soto	192	9	.....	.....	.....	.....	.....	.....	.....	2.93	.....	1.96	0	2	9	3	18	s.	Mrs. Bettie M. Dennis.
Melville	St. Landry	45	25	62.6	+ 3.6	85	17	27	10	44	2.02	− 1.41	1.90	0	2	18	4	8	e.	Charles B. McNeill.
Minden	Webster	194	25	61.4	+ 6.4	86	22	25	10	49	3.34	− 0.71	2.18	0	3	8	17	5	e.	Miss Ethel Fort.
Monroe	Ouachita	82	25	61.1	+ 4.4	82	18	33	11†	45	2.95	− 0.82	2.00	0	3	3	0	27	sw.	Kathryn Key.
Morgan City	St. Mary	14	7	.....	.....	.....	.....	.....	.....	.....	2.25	.....	2.05	0	3	10	1	19	ne.	Virgil E. Kinsey.
Napoleonville	Assumption	.....	4	65.0	.....	81	7	33	9	27	0.50	.....	0.50	0	1	29	0	1	.....	Leon Godchaux Co. (Ltd.).
Newellton	Tensas		6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Noyes R. Pendary.
New Iberia	Iberia	15	25	64.8	+ 3.5	81	16	39	10	30	2.30	− 0.98	1.25	0	3	18	7	5	se.	Mrs. John A. Gebert.
New Orleans (1)	Orleans	51	42	64.8	+ 4.2	81	21	42	10	22	2.67	− 1.12	1.39	0	5	14	8	8	e.	U. S. Weather Bureau.
New Orleans (2)	do	18	25	65.0	+ 4.3	87	21	33	11	41	2.35	− 0.70	1.17	0	4	7	5	18	ne.	Sugar Experiment Station.
Opelousas	St. Landry	83	21	63.2	+ 3.8	84	16†	30	10†	40	2.75	− 0.21	2.12	0	2	8	2	20	e.	Andrew Moresi.
Paradis	St. Charles	.....	2	.....	.....	.....	.....	.....	.....	.....	2.65	.....	1.75	0	4	.....	.....	.....	.....	R. E. Boyce.
Pearl River	St. Tammany	29	7	.....	.....	.....	.....	.....	.....	.....	2.70	.....	1.64	0	5	19	5	6	e.	Geo. F. Bancks.
Plain Dealing	Bossier	268	21	61.6	+ 6.6	82	18†	28	10	43	1.67	− 1.77	1.14	0	3	13	0	17	se.	Leon Sanders.
Rayne	Acadia	44	21	65.2	+ 4.5	86	17	33	10	37	2.90	− 1.01	1.90	0	2	12	1	17	e.	A. P. McNeil.
Reserve	St. John Baptist	.....	12	66.1	+ 7.2	95	4	32	10	56	6.01	+ 3.98	3.09	0	2	8	19	3	.....	Leon Godchaux Co. (Ltd.).
Richland Plantation	Rapides	.....	1	63.2	.....	85	17	30	10	40	3.09	.....	1.36	0	4	26	0	4	s.	A. B. Pendleton.
Robeline	Natchitoches	147	17	62.2	+ 5.9	89	18	24	9	48	2.32	− 1.18	1.20	0	2	20	4	6	s.	Anna R. McCook.

TABLE 1.—*Climatological data for November, 1913. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Louisiana—Continued.																				
Ruston	Lincoln	312	18	63.6	+ 6.2	82	18†	35	10	42	1.40	− 2.57	0.75	0	2	20	7	3	s.	Andor M. Larson.
St. Francisville	West Feliciana	115	10	65.6	.....	85	24	30	10	32	2.73	.....	1.48	0	2	24	4	2	e.	G. W. Newman.
St. Gabriel	Iberville	.....	.....	64.2	.....	82	21	40	10	24	2.50	.....	1.60	0	3	14	0	16	se.	Capt. J. B. Murphy.
Schriever	Terrebonne	17	21	63.4	+ 2.3	84	17†	30	10	45	3.50	+ 0.69	2.70	0	2	16	7	7	e.	William H. Gautreaux.
Shreveport	Caddo	249	42	62.7	+ 7.4	80	22	35	10	32	2.22	− 1.86	1.45	0	3	12	12	6	s.	U. S. Weather Bureau.
Simmesport	Avoyelles	42	7	.....	.....	.....	.....	.....	.....	.....	3.00	.....	1.57	0	2	5	0	25	n.	Cassius T. Leigh.
Southern Univ. Farm	Jefferson	.....	16	.....	.....	.....	.....	.....	.....	.....	2.05	− 0.55	1.90	0	3	16	8	6	se.	F. L. St. Martin.
Sugartown	Calcasieu	.....	20	64.3	+ 5.8	81	17	36	10	31	5.36	+ 1.44	2.61	0	4	1	27	2	.....	G. W. Richardson.
Tallulah	Madison	91	6	60.0	.....	82	19†	27	11	43[a]	0.76	.....	0.44	0	2	.....	.....	.....	.....	Neal T. Halt.
Walker	Livingston	.....	3	.....	.....	84	3†	.....	.....	.....	3.25	.....	2.25	0	2	19	10	1	.....	Prof. L. W. Wilkinson.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 7, Lower Mississippi Valley.*

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Colorado.																																
Buena Vista	Arkansas			.30																										T.		0.30
Calhan	Big Sandy			.10																	T.											0.10
Canon City	Arkansas			.11	.25																									.04		0.40
Colorado Springs	Fountain			.03	.01																.01											0.05
Cripple Creek	Oil Creek																															
Cuchara Camps	Cucharas			.69																	.06								.07	.48		1.30
Eads	Big Sandy																	T.														T.
Fairview	St. Charles			.56								.13					.27												.44			1.40
Florence	Arkansas																															
Fremont Experiment Station.	Fountain																															
Garfield	Little Arkansas			.66				.15					T.	T.	T.						.04	.06			.05			T.				0.96
Hamps	Big Sandy			.18																	T.	T.										0.18
Hermit Lake	Grape Creek			.80											.55						.37											1.90
Hoehne (near)	Purgatoire			.40	T.																.07				T.							0.47
Holly	Arkansas				.55																.10								.50			1.15
La Junta	do			.15	.32										T.										.05							0.52
Lake Moraine	Fountain																															
Lamar	Arkansas																								.60				.03			0.63
Las Animas	do			.56																	.13				.05							0.74
La Veta Pass	Cucharas			.23																	.29				T.				.18			0.70
Leadville	Arkansas			.04				.21					.03	T.	.09	.02				T.	.06	T.	T.						.02	.03		0.50
Limon (near)	Big Sandy			.12																												0.12
Madrid	Purgatoire			.33																	.07										.01	0.41
Marshall Pass	Arkansas		.17												.18														.27			0.62
Maxey	do																															
Monument	Fountain																															
North Lake	Purgatoire			.57																	.09									T.		0.66
Pueblo	Arkansas			.11											T.					T.	T.								T.		T.	0.11
Rocky Ford (near)	do																															
St. Elmo	Chalk Creek			.15				.12					T.	T.	.04	T.					.10	.07	.04		.14					.14		0.80
Salida	Arkansas			.15											T.						T.											0.15
Stonewall	Purgatoire			.38	T.																									.05		0.43
Trinidad	do			.46	.04																.03									T.		0.53
Two Buttes	Arkansas			.20											T.										T.					.17		0.37
Two Buttes Reserv'r	do																															
Victor	Oil Creek			.28																	.02											0.30
Vilas	Cimmaron																															
Westcliffe	Grape Creek			.46																	T.											0.46
Winfield	Clear Creek																															
Woodman Sanatorium.	Fountain				.01																									.03		0.04
Wortman	Arkansas	.10	.20	.10	.20	.10	T.	T.	T.	T.					.10	.20	.10	.10	.20					T.	T.	T.	T.			T.	.10	1.50
Yoder	do			T.										T.						T.												T.
New Mexico.																																
Abbott	Canadian		*	.40		T.												.10	T.		.20				.10							0.80
Albert	do		*	.16																	.33				.25							0.74
Aurora	do			.36																	.02				.16				.02			0.56
Bell Ranch	do				.31										.03			.49			.11				.26							1.20
Black Lake	do			.46																	T.				.15				.03			0.64
Cabeza	do			.05	.08													.40			.07				.35							0.95
Campana	do			*	.20											.27		.48							.25				T.			1.20
Chacon	do			.85																			*		.25							1.10
Cimarron (near)	do			.28																	.05				.20			T.				0.53
Clayton	do			.46													.01	.14			.17				.14				.51			1.43
Clovis	Red			*	.20												*	.28			.05			.13					.10	.15		0.81
Cuervo	Canadian				.08													.60							.38					T.			1.06
Dawson	do			.28																	T.				.19							0.47
Elizabethtown	do			.43																				.10					.21			0.74
Folsom	Dry Cimarron																															
Fort Union	Canadian			.30														T.			.05				.30							0.65
Hayden	do			T.	.35										T.	T.		.17			.08				.08				.30			1.08
Hoosier Ranch	do			.12														.42			T.				.36							0.90
Johnsons Park	do																															
Johnsons Ranch	do			.20														.35							.25							0.80
Kappus	do																	.56								.15			.72			1.43
Lake Alice	do																															
Logan	do			T.	.40													.35							.18				.30			1.23
Lykins (near)	Red																	.81						.40				.08				1.29
Maxwell (near)	Canadian			.15																	.15				.13							0.43
Melrose	Red			.29	.04													.84							.38	.04		T.			.08	1.67
Miami Ranch	Canadian			.55																					.18							0.73
Mills (near)	do			.33												.02		.15			.10				.17	T.				T.		0.77
Montoya	do				.30													.40			T.									T.	.02	0.72
Nara Visa	do																															
Palo Verde	do			.03	.31											.21		.23				.08		.20						T.		1.06
Pasamonte	do			*	.18																.62											0.80
Pleasant View	do			.20										.20			.25															0.65
Portales	Red			*	1.05						.30														.24					.67		2.26
Raton	Canadian			.01																.22					.06							0.29
Rociada	do			.82																	T.			.53				T.				1.35
Rosebud	do			.28											T.											.05			.12			0.45
Roy	do			.30											.10		.30					.10			.30							1.10
St. Vrain	Red										*	.68						.28										T.	.17			1.13
San Jon	Canadian				.17									T.			*	.54			T.				.18					1.35	.01	2.25
Solano	do			.02	.48													.48			.16				.25							1.39
Springer	do			.10	.04																				.15							0.29
Taylor	do			.08														.13			.10				.13							0.44
Texico (near)	Red																	.45					.22							1.35		2.02
Trementina	Canadian			.10										.16				.30			.06				.10						.10	0.82
Tucumcari (near)	do			.44														.75							.40				.50			2.09
Tucumcari	do			.44														.46							.50					.73		2.13
Valley	Dry Cimarron																															
Vance (near)	Canadian			*	.70											.05		.16			.03				.14					.75		1.83
Vermejo Park	do			.48																					.16						.07	0.71
Wagon Mound (near)	do			.19	.05													.04			.08				.29							0.65

TABLE 2.—*Daily precipitation for November, 1913. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Texas.																																
Amarillo	Canadian			.45	.27											T.	.01	T.							.25					.95	.05	1.98
Archer City	Red		.10		1.34	.06																.01	3.34	.72	.38	.41	*	.06		.63		7.05
Arthur City ‖	do		T.																		T.	T.	T.	1.42	T.		T.		T.		.70	2.12
Bonham	do																						.75	1.56				.13		.98		3.42
Canadian	Canadian				1.00	.03	.61														.13				.17					.01	.02	1.97
Childress	Red			1.00	.45																				.50				1.10	.30		3.35
Chillicothe	do		.05		.65	.43											.15	.01												.76	.20	2.83
Clarendon ‖	do				.90	.03									.04	.03	.02								.20				.90	.26		2.38
Clarksville	do																						.50							.80		1.30
Claude	do			1.10	.20											T.	T.	T.							.30	.10			.53	.97		3.20
Dalhart ‖	Canadian				.22														.05		.07					.11					1.33	1.78
Denison ‖	Red					.10																.28		3.10	.10	.20				.60	.20	4.58
Finley ‖	do																												.25		.55	0.80
Henrietta ‖	do	T.	.17	T.	.25	1.10															.05	.17	2.40	.05	.45					.75		5.39
Jefferson ‖	do																												.70	T.	.60	1.30
Memphis	do																															
Miami	Canadian			.04	1.28																.10				.15					1.65	.13	3.35
Ochiltree	do			1.00		.05															.08				.12					1.10		2.35
Paducah	Red	T.		.24	1.30											.15	T.	T.						.20	.51				.58	.12		3.10
Panhandle	Canadian			1.45												T.	T.					T.	T.	T.							.25	1.70
Paris ‖	Red		.02	.02		T.															T.	T.	.02	1.75	.04			.02	.03	.05	1.05	3.00
Plemons	Canadian			.35	.55											T.	T.								.12					.80	.40	2.22
Quanah ‖	Red				1.20	.28																				.73			1.20	T.	T.	3.41
Ringo Crossing ‖	do																							.68							.60	1.28
Romero	Canadian				.17												.50				T.				.15					1.00	.05	1.87
Sherman ‖	Red	T.	T.			.37														T.		.30		2.40	T.	T.		T.		.84	T.	3.91
Stratford	Canadian				.27																				.13					1.25	.05	1.70
Tulia	Red			.75											T.	T.	T.	T.							.40				.51	.49		2.15
Wellington	do			1.34												.31													1.00			2.65
Wichita Falls	do																															
Winfield	do	T.			T.	T.															.20	.28	T.						T.	.43		0.91
Kansas.																																
Alden	Arkansas			T.	.10										T.	.01		T.			.40				.01		T.	T.	.75	.45	1.72
Anthony	do			T.	.20	.02	T.								T.	.15					.17				.15	T.			T.	.63	.04	1.36
Ashland	Cimarron				.93	.10	.01									.21		.02			.30				.08	.15				2.16	.86	4.82
Burlington	Neosho														.23						.25									.49	.34	1.31
Chanute	do														.16	.20	T.					.46	1.02			T.	T.	.02		.44	.48	2.78
Cimarron	Cimarron			T.	.35										T.	T.					.20					T.	.06			.91	.30	1.82
Coldwater	do			T.	.57	.03										.19					.34				.02	.18				1.84	.47	3.64
Columbus	Neosho		T.													.25	.06	.05		.03	.01	.07	.03			.06		.35	T.	.12	.03	1.06
Coolidge	Arkansas			.10											32															.27		0.69
Cottonwood Falls	Neosho														.07	.05			T.			.37				T.			.14	.55	.28	1.46
Council Grove	do														.12	.07		.03				.15				T.				.40	1.12	1.89
Cunningham	Arkansas				.22	T.		T.								.03						.18				T.				1.00	.56	1.99
Dodge City	do			.07	.28										T.				T.		.16				.03					1.51	.09	2.14
El Dorado	do				.16	T.									.05	.10	T.	.02				.50							.29	.80	.22	2.14
Ellinwood	do			T.	.18	.03									.02	T.		.02	T.		.37				.08	.01		.01	.02	.48	.36	1.58
Emporia	Neosho														.17	.06						.25				.01			.08	.62	.67	1.86
Eureka	Verdigris			.10											.07	.20		T.			.22							T.	.25	1.60	.40	2.84
Fall River	do			T.	T.										.05	.25	.05			T.	T.	.30	.05					T.	.15	1.15	.50	2.50
Fargo	Cimarron		T.	.59												.03										.09				1.45	.45	2.61
Fredonia	Verdigris			T.	.02			T.	T.						.03	.17	.02	.01			T.	.19	.95			.01		.02	.03	.92	.24	2.61
Garden City	Arkansas			T.	.30										T.			T.			.04				T.					.75	.10	1.19
Greensburg	do			T.	.38	.03									T.	.18					.20				T.	.12		T.		1.68	.48	3.07
Grenola	Verdigris				.13										T.	.14						.38	.01			T.			.28	.92	.22	2.08
Howard	do				T.										T.	T.					T.	.68	.09			T.		T.		.69	1.00	2.46
Hugoton	Cimarron			.06	.28			.10										T.			T.				.03					1.96	.56	2.99
Hutchinson	Arkansas			T.	T.											.28						.13								1.05	.33	1.79
Independence	Verdigris			T.	T.								01		.01	.51			.01	.01	T.	.33	.65			.05		T.	.02	1.32	.09	3.01
Iola	Neosho	T.		T.	T.			T.							.16	.14	.01				.20	.02	.70			T.		.13	.01	.12	.18	1.67
Irene	Arkansas		.20															T.			.13								T.	.41	.20	0.94
Jetmore	do																															
Kingman	do				.15	T.	T.								T.	.06					T.	.14				T.			T.	.59	.59	1.53
La Crosse	do															T.		T.		.43						T.				.99	.50	1.92
Lakin	do			T.	.08																.15				T.					.32		0.55
Larned	do			T.	.31	.01										T.					.35				T.	.08		.01	.01	1.20	.21	2.18
Lebo	Neosho							T.							.14	.03	T.	T.			T.	.20				T.		T.	.41	.62	.15	1.55
Le Roy	do				T.								T.			.14	.07					.18					T.		.02		.85	1.26
Liberal	Cimarron			.24	.83										T.	.09		.01	T.		.01				.09			T.		1.60	.35	3.22
Macksville	Arkansas				.31	T.									T.	.03					T.	.25				.06				.81	.31	1.77
McPherson	do				.07										T.	.09						.17							.03	.98	.89	2.23
Madison	Verdigris																															
Marion	Neosho				.05			T.							.03	.15	.03	.01		T.		.35				.02		.01	.03	1.02	.28	1.98
Medicine Lodge	Arkansas			T.	.25	.03										.05					.09				T.	.13				.74	.55	1.84
Minneola	Cimarron				.41	.04										.25					.27									1.57		2.54
Mount Hope	Arkansas				.15											.08					.20		--							1.00	.30	1.73
Neosho Rapids	Neosho														.10	.08	.04					.36								.62	1.15	2.35
Ness City	Arkansas				.20																.44				.10			T.	.20	.18	.12	1.24
Newton	do				.15										T.	.08		.01	.02			.30				.03			.02	1.10	.67	2.38
Norwich	do			T.	.16	.01									T.	.08	.02	T.			T.	.22				.09		.01	.03	.52	.06	1.20
Oswego	Neosho															.30					.13		.02			.12	.03	.04		.72	.24	1.60
Pittsburg	do																															
Plains	Cimarron				.71									T.							.17				T.	T.				1.68	.51	3.07
Pratt	Arkansas				.60											.14						.20								1.32	.25	2.51
Richfield	Cimarron				.04	.06										T.		T.			T.				.08					1.26	.24	1.68
Rome	Arkansas				.30											.09		.01	.05			.50				T.				.73	.05	1.73
Santa Fe	Cimarron				.45																.08				.05					1.70		2.28
Sedan	Verdigris			T.	T.										.05	.12			T.		T.		1.60			T.		.04		1.32	.05	3.18
Toronto	do														.19	.15						.25	.04							1.30	.14	2.07
Ulysses	Cimarron				.23																									.51		0.74
Walnut	Neosho	T.													.04	.23					T.	.23	1.33							.29	.32	2.44
Wellington	Arkansas				.28											.12	T.	T.		T.								.03		1.04	.08	1.55
Wichita	do	T.		T.	.21									T.	T.	.07		.01	T.		.24				.01	.01	T.	.01	.02	1.06	.09	1.73
Winfield	do	T.			.46										T.	.15	T.				.43				.05	T.		T.	.08	1.10	T.	2.27
Yates Center	Verdigris	T.		T.	T.			T.						.12	.12						T.	.07	T.						T.	.98	.12	1.41
Oklahoma.																																
Ada	Canadian		.05		T.												.20			T.	T.		.40	1.15		.60			2.10	.53	.07	5.12
Altus	Red	.02		.06	1.28	.05		.01								.05		T.			.02				.20	.16			T.	.79	.02	2.66
Alva	Arkansas					.03	.28								T.							.15				.18				1.00	.20	1.84

TABLE 2.—*Daily precipitation for November, 1913. District No. 7*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Oklahoma—Contd.																																
Apache	Red	T.		.02	2.18	.33	.03	T.								.02	T.		.03		.10	.01	.04	T.	.15	.32	T.	T.	T.	.65	.46	4.34
Arapaho	Washita				2.04	.49										.12	.02	T.			.11				.10	.18		.02		.81	T.	3.89
Ardmore	Red		.14		.06	4.08										T.	.18			.08		.48		2.20		.70	.06	.11	.90	.53	.09	9.61
Bartlesville	Arkansas				.10	.01											.08					.36	.55			.04	.05	.06	.10	.50	.36	2.21
Beaver	Canadian				.49	.05										.05						.17				.18				.75	.45	2.14
Buffalo	Cimarron				.53	.12															.40					.25				3.12	.43	4.85
Cache	Red				2.90	.48																			.20				1.60		.60	5.78
Calvin	Canadian		.08														.54					.12	.20	1.30		.20	.10		.15	.25	.30	3.24
Chandler	do		.10		.50	.10		T.								.15	.25					.25	T.			.35	T.			.40	.16	2.26
Chattanooga	Red				1.50	.10												.17	.30		T.		.07		.14	.36				1.00	.31	3.95
Chickasha	Washita		.05		.45	1.43		T.								.05	.07					.15				.53	.04		T.	.38	.23	3.38
Cleveland	Arkansas			.02	.43											.11			T.	.04	.09	.52	.60		T.	.15		.34	.20	.63		3.13
Cloud Chief	Washita	T.		T.	2.63	.19										T.					.10				.12	.18			T.	1.13	.47	4.82
Durant	Red		.02		T.												.05			T.	T.	.40		2.45		.07	.05	T.		.62	.06	3.72
Eldorado	do				1.65																									.96	.06	2.67
El Reno	Canadian																															
Enid	Cimarron				.85	.45												T.				.53				.17	.04			.25	.12	2.41
Erick	Red	T.			1.34	T.										.10				T.			.14			.12				.68	.59	2.97
Eufaula	Canadian															.32	.89				.03		.66	.10		.15		T.		.60		2.75
Fairland	Arkansas															.74					T.	.16	.80			.04		T.	T.	T.	.10	1.84
Fort Gibson	do		.06	T.												.15	.31					T.	T.	1.70		T.	.08	T.	.62	.06	.42	3.40
Frederick	Red				1.75	.01										.12	.09				.03		.03		.19	.23			T.	1.25	.08	3.78
Geary	Canadian	T.		T.	2.68	.12									T.	.06	.01		T.	T.		.06			.13	.28			.01	.48	.17	4.00
Goodwell	do			.07	.52											.05					.12				.09				1.90		2.75
Guthrie	Cimarron				1.55												.05						.30			.65				.50	.10	3.15
Guymon	Canadian			.25	.50											.20					.18				.20					2.10	3.43
Hammon	Washita		T.		1.35	.30	.01									T.	.07	.01				.17				.30			.01	1.32	.16	3.70
Hartshorne	Canadian																															
Healdton	Red	T.	T.		3.75	1.40										T.						.25	3.65	.67	.15	.71	T.	1.20		1.10		12.88
Heavener	Arkansas																.43					T.	1.77	.08	T.	T.						2.28
Helena	Cimarron				1.36																	.20								.42		1.98
Hennessey	do				1.75	.30										.06									.37					.32		2.80
Hobart	Red	T.			1.81	.15										.05					.25				.12	.11			T.	1.45	.57	4.51
Holdenville	Canadian		.11		.10												.42					.44		.88		.19	.17		1.80	.20	.24	4.55
Hooker	do			.14	.77											.07					.05				.07		.03			1.70	.22	3.05
Hugo	Red																						1.40									1.40
Hurley	Cimarron			T.																	T.				T.					.35	.15	0.50
Idabel	Red																											1.30		.43		
Jefferson	Arkansas			T.	.80	T.										.17					.21					.17			.02	.46	.11	1.94
Kenton	Cimarron																															
Kingfisher	do	T.		T.	2.86											.36			.01		T.	.31	T.			.39		.01		.53	.08	4.55
Lawton	Red				.55	2.15										.08	.09				.04		.05			.46	.08	.01		.60	.49	4.60
Lawtonka Lake	do				2.35	.52										.13			.01			.06	T.			.49				.52	.58	4.66
McAlester	Canadian		.17														.65						2.37			.15			.12	.70	.03	4.19
Mangum	Red				1.25	.12	T.										.10					.10			.15	.25				1.50	.38	3.83
Marlow	Washita	T.			1.30	.50											.10					.10	.36		.10			T.		.55		3.01
Meeker	Canadian			.65												.63			T.	T.		.65				.45	.25	.75		1.65		5.03
Muskogee (1)	Arkansas															.20	.18				.10		1.80			.07		.19	.11	.35	.27	3.27
Muskogee (2)	do															.28	.20				T.		1.63			.06	T.	.38	T.	T.	.50	3.05
Mutual	Canadian				1.80																									.80		2.60
Neola	Washita	T.		T.		3.45										T.			T.		.15					.35		T.		.51	.30	4.76
Newkirk	Arkansas				.25																	.40				T.				1.15		1.80
Norman	Canadian	T.	T.		1.90	1.40									T.	.12	.17		.03		T.	.20	.48		.07	.62	.05	.01		.30	.28	5.63
North Muskogee	Arkansas		.04	T.												.06	.25				T.	.19		1.08		.02	.04	.01	.92	.08	.56	3.25
Oakwood	Canadian			T.	2.00	.15										.06	T.				.23				.06	.31				1.02	T.	3.83
Okeene	Cimarron	T.			2.62	.08										.03				T.	T.	.12			.01	.30			T.	.36	T.	3.52
Okemah	Canadian															.30						.40	.90					1.05		1.50		4.15
Oklahoma	do	.01	.05	.24	1.68	.10	T.								T.	.01			T.		.44	.01	.09		.41	.05		.01	T.	.31	.30	3.71
Okmulgee	do																															
Pauls Valley	Washita		.72	2.05	1.06																T.	.43	1.21		.20	.83		.45	.04	.20	.43	7.62
Pawhuska	Arkansas	T.		T.	.23														T.		T.	.76	.63						.45	.57	.11	2.75
Perry	do			1.00															T.			.75	.05			.10				.54	.10	2.54
Rankin	Red	.06			1.30											.09	T.	.03			.06				.28				T.	.90	.40	3.12
Ravia	Washita				.40	.27										.06	.10						1.60	.65		.53				.45		4.06
Sac and Fox Agency	Canadian			.26	.31											.33	.06				.02	.21	.04			.43	.03		.58	.40		2.67
Shawnee	do		.09		.14	.07										.09	.22			.03		.17	1.69			.52	.12	.04	.38	.59	.24	4.39
Snyder	Red				1.98											.15					.11				.11	.22		T.		1.35	.55	4.47
Stillwater	Cimarron				1.28	.07		.01								T.	.15	T.			T.	.39	.37			.17	.07			.32	.13	2.96
Tahlequah	Arkansas		T.	.01												.25					.05	.06	1.12			.15	T.		.50	.15	.23	2.52
Tulsa	do				.24	.05										.14	.42			.05		.15	.10			.12	.13		.05	.31	.27	2.03
Vinita	do															.83	.05					.12	1.75			.15	T.	T.		.15	.05	3.10
Wagoner	do																															
Waukomis	Cimarron			T.	1.38	.15									T.	.05			T.			.12			T.	.22		T.	.20	.35	T.	2.47
Waurika	Red	.05	.15	T.	1.30	.75	T.									T.	.06					.14	3.80	.20	.28	.59	.05	.02		.53	.02	7.94
Weatherford	Canadian	T.			1.51	1.60	.03	T.									.13	T.				.11				.37	.02	T.	T.	.97		4.74
Webbers Falls	Arkansas															1.25							.55					.35		.50		2.65
Whiteagle	do				.80										T.	T.			T.		.40		1.50			.10			T.	.50		3.30
Woodward	Canadian	T.		.65	.33	.04										.03	T.	T.	.01		.35					.36		T.	1.30	.22	.21	3.50
Wyandotte	Arkansas																	1.15						1.50						.25		2.90
Missouri.																																
Belle	Meramec																															
Birchtree	Black															.44	.45						.43				.23	.25	.73	.38	.58	3.49
Cardwell	Mississippi																	.66												.75		1.41
Caruthersville	do							T.	.28								.48						T.					T.	.20	.09	.25	1.30
Cassville	White															.38	.05						.03					.90	T.		.01	1.37
Dean	Neosho															.58	.06				.06	.09	.83			.05	.09	.55	.20	.02	.16	2.64
Doniphan	Black								.55							.12	.61			T.			.04	.17					.18	1.04	.65	.32	3.68
Fruit City	do														T.	.27	.42		T.					.35		.10	.25		.40	.80	.60	3.19
Gano	Meramec														.27	.12	.27						.54			T.		.19	.16	.25	.20	2.00
Goodland	Black																						.41			.05		.18		.66	.37	1.67
Hollister	White															1.00	.50						.20			.25	.10	1.05			.25	3.35
Ironton ‖	Mississippi								.23	T.					T.	T.	.30		T.				.05	.50				.02	.12	.10	.78	.35	2.45
Jackson	do							.57								1.15							.15			.02	.57		.53	.30	.30	3.59
Joplin	Neosho															T.	.40				T.	T.	.90			.10		1.10	T.		.40	2.90
Koshkonong	Black		T.					.22								.88	.50						.48			T.	.25	.65	.65	.37	.46	4.46
Lamar ‖	Neosho		T.		T.											.37	.34					.14	.22				T.	.19	.24		T.	1.50
Marble Hill	Mississippi																2.20												.78	1.10	.50	4.58
Mountaingrove	White		T.					T.							T.	.41	.08			T.	T.	T.	.52			.08	T.	.12	.70	T.	.37	2.28
Mount Vernon	Neosho															.38	.13						1.60			T.		1.30	T.		.33	3.74

TABLE 2.—*Daily precipitation for November, 1913. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Missouri—Contd.																																
Neosho	Neosho		T.													.60	.15			T.	T.	.08	.79			T.	T.	.15	.09	T.	.08	1.94
New Madrid ||	Mississippi								.35					.01			.56											.10	.25	.30	1.57
Oakfield	Meramec							T.							2.20	.26	.21						.19			.02	.08	T.	.08	.34	.15	3.53
Rolla	....do														.38	.40							.50			T.		.14	.10		.23	1.75
Springfield	White		T.	T.				T.							T.	.37			T.	T.	T.		.70			T.	.02	.12	.34	.02	.02	1.59
Kentucky.																																
Blandville	Mississippi							.67	.03	T.	T.			.20		.13	.47						.06					.05	.31	.09	.48	2.49
Tennessee.																																
Arlington ||	Mississippi																															
Bolivar	....do							.14	.31								.15							.03					.03	.43	1.09
Brownsville ||	....do							.04	T.								.54	T.											.15	.53	1.26
Covington ||	....do																.95	.10											.30	.30	1.65
Dyersburg ||	....do							T.									.75											.10		.50	1.35
Jackson	....do							.15									.48												.15	.20	.32	1.30
Kenton	....do								.23								.50											T.	.08	.43	.34	1.58
Memphis	....do							T.									.44							.06					.82	.32		1.64
Milan ||	....do							T.	.20								.20	.17												.02	.02	0.61
Trenton	....do								.11								.49												T.	.15	.19	0.94
Union City ||	....do								.41								.32											.20	.04	.61	.12	1.70
Arkansas.																																
Alicia	White																1.15													1.45	.32	2.92
Amity ||	Ouachita																						.21	.47					2.70	.40	.40	4.18
Arkadelphia	....do																.06	.03					.02					.94	.14			1.19
Arkansas City ||	Mississippi																	.04											.50	2.50	.80	3.84
Batesville ||	White								.10								1.12							.50	T.				.35	.70	.62	3.39
Bee Branch	Arkansas																.55						.45					.25	.45	.10	.50	2.30
Bentonville	....do		T.													.78				T.	.01	.03	.08			.14	.05	1.17		.02	.18	2.46
Bergman	White															.64	.39				.04		.42	.04		.19	.06	.04	T.			1.82
Black Rock ||	....do								.19								.90							.19					.07	1.04	.29	2.68
Brinkley ||	....do																T.	1.23						.26					.14	.78	.38	2.79
Calico Rock ||	....do																1.20											T.	T.	.30	.40	1.90
Camden ||	Ouachita																												.36	.47	.72	1.55
Centerpoint	Red																T.					.30	.45					2.30	.15	.30	T.	3.50
Clarendon ||	White																T.	.25						.40					.95	.25	.55	2.40
Conway	Arkansas																.48						.25	.29				.37	.86	.49	.06	2.80
Corning	White							.37	.02					T.		.01	.99	.02						.10				.02	.24	.38	.79	2.94
Dardanelle ||	Arkansas																.65						.25	.51				.16	.03	.12	.20	1.92
Dodd City	White															*	1.10					.10		.42			.24		.14		.41	2.41
Dumas	Arkansas																											T.	1.30	.95		2.25
Dutton	White		T.													.39	1.12			T.		.40	1.53			T.			1.05	.27	.40	5.16
Eldorado ||	Ouachita																												.55	.95	.55	2.05
England ||	Arkansas																	20						.80					.50	.35	.45	2.30
Eureka Springs	White															.65	.36						.21			.12	T.		1.61	T.	.31	3.26
Fayetteville	....do															1.07	.82						.43	.04		.03	.15	.09	.80	.03	.47	3.93
Fordyce	Ouachita																												.60	.50		1.10
Fort Smith	Arkansas		T.													.21	.56			T.	T.	.16	.53	.12		.10	T.	.37	T.	.09	.01	2.15
Fulton ||	Red																							.20					1.06	.16	.26	1.68
Georgetown ||	White																.63							.02					.45	.32	.38	1.80
Hardy	....do							.07								.08	.82				T.		1.30	.02		T.		.03	.90	.17	.51	3.90
Helena ||	Mississippi																	.08												2.30	.40	2.78
Hot Springs	Ouachita				T.			T.								.32	T.						.18	T.			T.	1.98	.35	.94	.72	4.49
Huttig	....do																												1.20	.85		2.05
Jonesboro	White																												.40	.25	.21	0.86
Junction	Ouachita																											T.	1.40	.80		2.20
Lake Farm	Arkansas																.40												.50	.84		1.74
Lewisville	Red																					T.		T.				T.	.30	.45		0.75
Little Rock	Arkansas																.19			T.		T.	.03	.11				.97	1.34	.41		3.05
Lutherville	....do															.12	.48	T.			.11		.79	.19		.02		.31	.18	.29	.11	2.60
Malvern ||	Ouachita																	.24						.87	T.				1.10	.67	.55	3.43
Mammoth Spring	White															.20	.45						.27	.03				.23		.21	.50	1.89
Marked Tree ||	St. Francis																.30													.33	1.17	1.80
Mena	Ouachita																.25			.02		.32	.75	.37				2.00	.03	.32	T.	4.06
Newport ||	White								.03								.78							.34					.04	.72	.36	2.27
Pine Bluff ||	Arkansas																	.38						.07					.39	.25	.46	1.55
Pocahontas	White							.35								.05	.80						.15	.40					.54	.60	.45	3.34
Pond	Arkansas															.61	.16		T.	T.	T.		.25			T.	T.		1.07	T.	.30	2.39
Portland ||	Ouachita																												.95	1.93	1.07	3.95
Prescott ||	....do																	.05				.03		.16					1.25	.44	.34	2.27
Princeton	....do																			T.				T.					T.	T.		T.
Rison	....do																													1.12		1.12
Rogers	Arkansas		T.													.65	.30						.06			.02	.02	.01	.91	.02	.22	2.21
Sheridan	Ouachita																							.10					.90	1.20	.40	2.60
Springbank ||	Red		.02																				T.	T.					.80	.06	.35	1.23
Stuttgart	Arkansas																.17							.12					.40	.70		1.39
Subiaco	....do															.14	.82					T.	.53				.16	.34	.27	.04	.07	2.37
Swain	White		.02												T.	2.04		T.	T.	T.	.02	T.	.82	.21		.07		.08	.24	.26	.08	3.84
Texarkana ||	Red																							.10					.45	.15	.32	1.02
Warren ||	Ouachita																													.22	.57	0.79
Whitecliffs ||	Red																							.18					.54	.07	.28	1.07
Wiggs	Ouachita																.27			T.			T.	.27				1.60	1.22	.52	.06	3.94
Wynne	St. Francis																.15	.31						.10					.10	.48	.29	1.43
Mississippi.																																
Anguilla	Yazoo																												.50	.36	.64	1.50
Austin	....do							.08	T.								.25							T.					1.89	.20	.39	2.81
Batesville ||	....do																	.22												.40	.39	1.01
Big Creek	....do																															
Canton	Big Black							.09														.03								.89	.93	1.94
Charleston	Yazoo																.25												.15	.34	.40	1.14
Clarksdale ||	....do																	.27												2.00	.38	2.65
Cleveland	....do																.19	.01											1.00	.87	.40	2.47
Coffeeville	....do						.02										.03	.29											T.	.10	.56	1.00
Corinth ||	Mississippi							.14	.02									.30												.03	.64	1.13
Crenshaw	Yazoo																.20												1.60	.40	.10	2.30
Duck Hill	....do																T.												T.	T.	1.48	1.48
Edwards	Big Black																					.02								2.70	1.33	4.05
Fayette	Mississippi							T.																					1.85	.94		2.79

TABLE 2.—*Daily precipitation for November, 1913. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Mississippi—Contd.																																
Greenville ‖	Yazoo																	.03											.98	.90	.38	2.29
Greenwood ‖	do							T.										.13												.60	1.08	1.81
Granada	do								.10										T.										T.	.30		0.40
Hernando ‖	do																	.30						.15						1.00	.25	1.70
Hickory Flat	do																.25														.95	1.20
Holly Bluff	do																	T.											*	*	2.28	2.28
Holly Springs ‖	do							.10	.10									.19												.15	.48	1.02
Kosciusko ‖	Big Black							T.										T.					.02							.50	1.05	1.57
Malone ‖	Yazoo							.26	.04																					.08	.12	0.50
Moorhead	do							T.									T.												.53	.60	.58	1.71
Natchez ‖	Mississippi																													1.61	1.22	2.83
Pontotoc	Yazoo							T.									.75													.50	.17	1.42
Port Gibson ‖	Mississippi																	T.												1.28	.69	1.97
Rosedale ‖	Yazoo																	.20											.45	2.10	.50	3.25
Shoccoe	Big Black							T.	.34												T.									.31	2.60	3.25
Suffolk	Mississippi																												.70	1.09		1.79
Swan Lake ‖	Yazoo																.18													.86	.32	1.36
Tchula	do																T.												T.	1.05	1.41	2.46
University	do							.31									.22												T.	.12	.60	1.25
Utica	Mississippi						T.	T.																					1.40	1.28	.27	2.95
Vicksburg	do							T.																					3.17	.69		3.86
Water Valley	Yazoo							.20									.35	T.												.67		1.22
Woodville	Mississippi																												1.82	.95	.36	3.13
Yazoo City ‖	Yazoo							T.										T.											T.	1.54	1.65	3.19
Louisiana.																																
Abbeville	Coast																					.10						.02	.75	1.25		2.12
Alexandria ‖	Red																						.33						.67	.93	1.53	3.46
Amite ‖	Coast																													1.00	2.20	3.20
Angola	do																													2.00		2.00
Antioch	Red																													1.61	.80	2.41
Avoca Island	Coast						.10																				.20		.20	2.40	.13	3.03
Baton Rouge ‖	do																.05							.05						.95	1.16	2.21
Burnside	do																					T.	.02	T.						.20		1.20	1.42
Burrwood	do							.30									T.	T.	T.					T.		T.		T.	1.17	.31	.50	2.28
Cades	do																													2.58	1.05	3.63
Calhoun	Ouachita																												1.05	.67		1.72
Cameron	Coast																					.17							.26	.94	.08	1.45
Carrollton	do																															
Cheneyville ‖	Red																													2.25	1.00	3.25
Cinclare	Coast																												.80	1.20		2.00
Clinton ‖	do																	T.				T.	T.							1.26	.94	2.20
Collinston	Ouachita																												4.00	.90	.07	4.97
Covington ‖	Coast																											.05	.14	1.93	1.85	3.97
Dodson	Red																							.17					1.15	.89		2.21
Donaldsonville ‖	Coast																				T.									.20	2.00	2.20
Dutchtown ‖	do																				T.				T.				.42	1.42		1.84
Farmerville	Ouachita																										.23		.28	.66		1.17
Florence ‖	Coast																											.15	.30	1.45		1.90
Franklin ‖	do							.08														.01		T.				T.	.02	.10	2.50	2.71
Franklinton	Pearl																												T.	1.70	1.23	2.93
Grand Cane ‖	Red																												2.78		1.21	3.99
Grand Coteau	Coast																												.10	2.20	.50	2.80
Hammond	do																												.28	1.50	1.25	3.03
Houma ‖	do																				.10		.25				.20		1.10	2.05	.05	3.75
Jeanerette	do																														2.00	2.00
Jennings ‖	do																						.10						.25	.66	1.46	2.47
Laark	Red																											2.10		.90		3.00
Lafayette ‖	Coast							.01																						.61	1.61	2.23
Lake Charles ‖	do																													2.15	1.90	4.05
Lakeside	do																					.18								1.70		1.88
Lawrence ‖	do																													.83	1.53	2.36
Liberty Hill	Red																												1.22	.75	T.	1.97
Logansport ‖	Sabine																												1.96		.97	2.93
Melville ‖	Red							T.																						.12	1.90	2.02
Minden ‖	do																												2.18	.18	.98	3.34
Monroe ‖	Ouachita																						T.						2.00	.10	.85	2.95
Morgan City ‖	Coast							.12																				.08			2.05	2.25
Napoleonville	do																													.50			0.50
Newellton	Mississippi																															
New Iberia	Coast						T.															T.					T.		T.	.95	1.25	2.30
New Orleans (1)	do						T.																				.02	.16	1.39	.97	.13	2.67
New Orleans (2)	do																											.13	.13	1.17	.92	2.35
New Orleans (3)	do																											.05	1.34	.75	.13	2.27
New Orleans (5)	do																											.08	1.61	.98	.17	2.84
New Orleans (6)	do																											.11	1.53	.92	.11	2.67
New Orleans (7)	do																											.27	1.91	1.50		3.68
New Orleans (8)	do																											.05	1.10	.91	.01	2.07
Opelousas ‖	do																													.63	2.12	2.75
Paradis	do														.05									.70				.15			1.75	2.65
Pearl River ‖	Pearl							.10	T.																			.04	.02	1.64	.90	2.70
Plain Dealing	Red																											.01	1.14	.52		1.67
Rayne ‖	Coast																						T.	T.					T.	1.00	1.90	2.90
Reserve ‖	do																													2.92	3.09	6.01
Richland Plantation	Red																						.38						.47	.88	1.36	3.09
Robeline ‖	do																												1.12	T.	1.20	2.32
Ruston	Ouachita																												.65	.75		1.40
St. Francisville ‖	Mississippi																T.													1.48	1.25	2.73
St. Gabriel	Coast																						.10						.80	1.60		2.50
Schriever ‖	do																													.80	2.70	3.50
Shreveport	Red																							T.					.61	.84	.77		2.22
Simmesport ‖	do																													1.57	1.43	3.00
So. University Farm	Coast																										T.		.10	.05	1.90	2.05
Sugartown ‖	do																					.84						.58	2.61	1.33		5.36
Tallulah ‖	Mississippi																												.44	.32		0.76
Walker	Coast																													2.25	1.00	3.25

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 7, Lower Mississippi Valley.*

Date.	Colorado.						New Mexico.				Texas.				Kansas.										Oklahoma.			
	Lamar.		Leadville.		Pueblo.		Albert.		Cimarron.		Amarillo.		Paris.§§		Dodge City.		Ellinwood.		Iola.		Liberal.		Wichita.		Ardmore.§§		Bartlesville.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	51	28	41	20	71	22	56	28	60	22	47	42	54	37	59	37	60	36	54	31	60	35	56	37	56	42	55	36
2....	50	27	46	20	67	27	70	38	64	22	63	42	67	42	63	37	55	40	52	41	67	37	55	44	59	43	59	45
3....	46	30	30	20	51	30	59	33	52	31	50	35	76	41	48	38	53	41	59	45	60	38	52	46	64	50	56	45
4....	50	25	42	15	38	29	48	26	45	21	37	32	67	42	41	35	47	39	58	45	39	33	51	44	55	51	57	50
5....	55	23	49	20	47	28	50	24	56	23	54	34	75	52	53	39	54	40	68	39	55	37	60	43	65	52	70	40
6....	67	30	42	26	71	35	79	26	66	31	76	37	76	47	66	40	61	47	68	51	77	55	62	54	65	50	71	50
7....	56	25	33	17	58	36	78	30	67	39	58	42	77	47	59	39	61	43	62	43	69	40	63	44	70	52	62	44
8....	65	27	42	14	53	24	78	28	56	23	56	32	59	44	55	30	55	29	51	33	59	43	52	35	55	40	50	38
9....	67	30	50	22	60	26	69	26	65	30	65	37	58	36	54	30	53	24	48	28	59	47	49	30	56	35	57	34
10....	58	25	52	24	76	25	73	39	73	23	74	34	63	34	52	27	51	22	45	25	67	45	48	26	62	34	54	28
11....	64	30	45	25	74	29	77	25	73	21	72	41	78	34	79	36	75	32	65	28	70	29	70	37	72	40	73	33
12....	58	34	42	22	71	40	77	32	66	41	78	45	77	40	68	37	68	39	73	55	69	40	71	51	78	60	78	60
13....	60	35	43	25	54	34	70	40	64	35	75	46	73	56	56	36	56	33	68	50	72	36	55	42	78	61	77	58
14....	66	36	38	18	43	32	70	40	64	34	58	40	72	60	43	37	49	39	54	48	49	39	53	46	71	63	70	64
15....	69	33	30	14	57	28	62	38	62	30	47	41	72	61	55	38	48	37	49	41	50	38	46	42	73	61	50	50
16....	65	35	48	16	66	20	73	34	66	30	62	46	74	62	64	30	65	29	50	34	62	32	48	34	72	52	70	46
17....	67	36	49	23	67	32	65	56	67	34	65	51	79	58	69	51	70	43	63	34	73	50	64	48	77	52	72	53
18....	70	34	47	26	68	33	70	48	68	26	69	44	80	58	71	54	73	55	72	59	70	50	69	60	75	61	77	60
19....	67	35	45	26	54	36	72	38	69	36	79	47	77	58	69	46	71	51	77	64	73	45	72	61	76	65	76	65
20....	67	34	40	24	59	31	55	35	58	27	66	47	76	66	68	45	71	49	72	54	70	40	71	53	71	67	78	62
21....	63	37	36	16	55	33	61	34	57	30	68	40	80	66	64	42	68	46	72	56	68	37	64	49	80	56	78	55
22....	61	34	29	8	43	20	60	30	49	29	53	39	80	68	51	33	62	43	64	45	56	38	62	42	72	70	68	68
23....	59	31	44	8	59	13	56	26	52	20	55	34	59	57	60	26	58	25	55	34	60	27	56	35	55	48	57	47
24....	58	30	47	15	44	19	43	29	41	27	46	36	63	51	50	31	55	26	59	30	48	30	52	33	53	45	57	32
25....	62	36	36	18	63	30	60	35	53	30	60	36	62	50	64	37	55	39	51	46	62	37	52	42	63	45	56	47
26....	61	19	43	16	58	27	60	27	55	29	61	40	72	49	63	33	62	33	62	50	62	37	60	49	71	51	67	52
27....	55	25	37	13	56	22	66	26	61	20	65	36	70	51	60	31	53	32	60	51	60	34	55	46	68	61	68	56
28....	51	35	32	10	58	26	65	27	58	27	65	42	72	60	62	47	61	47	66	56	61	31	60	49	70	54	69	60
29....	49	35	40	4	47	29	52	40	51	34	49	36	62	61	50	40	58	44	62	53	60	37	59	55	65	55	64	59
30....	45	30	34	10	46	21	56	26	52	26	54	36	60	51	46	38	50	44	62	53	54	38	59	52	55	50	65	56
Mns..	59.4	30.8	41.1	17.8	57.8	27.9	64.3	32.8	59.7	28.4	60.9	39.7	70.3	51.3	58.7	37.3	59.3	38.2	60.7	44.1	62.0	38.5	58.2	44.3	66.7	52.2	65.4	49.8

Date.	Oklahoma.														Missouri.													
	Enid.§§		McAlester.§§		Mangum.§§		Muskogee.		Oklahoma.		Weatherford.§§		Woodward.§§		Caruthersville.		Ironton.§§		Lamar.§§		Olden.		Springfield.		Blandville, Ky.		Jackson, Tenn.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	60	32	57	40	60	38	54	42	54	42	57	36	56	26	58	29	52	18	56	32	.....	.....	50	32	49	27	56	29
2....	50	35	64	42	62	42	56	42	55	41	60	42	63	40	65	30	58	28	53	35	.....	.....	54	39	58	34	64	30
3....	56	43	70	45	60	41	60	43	59	47	59	45	59	45	71	36	66	40	61	41	.....	.....	59	43	66	41	72	36
4....	53	48	70	50	54	45	70	44	52	50	52	48	46	41	70	39	64	41	59	43	.....	.....	63	47	62	43	70	37
5....	54	46	76	50	58	45	68	47	64	50	56	48	52	43	69	35	62	26	70	42	.....	.....	64	41	59	35	68	31
6....	64	48	73	52	66	46	72	48	66	52	62	48	65	43	76	32	68	26	72	45	.....	.....	68	44	70	35	74	31
7....	63	44	73	56	63	45	69	50	65	45	67	42	64	39	71	52	68	42	64	50	.....	.....	63	44	66	57	70	56
8....	62	34	56	40	66	45	55	40	53	36	58	34	58	31	65	44	50	41	52	34	.....	.....	47	33	57	41	71	44
9....	50	38	56	35	59	43	52	31	50	33	55	30	58	25	53	31	46	27	49	26	.....	.....	43	27	41	25	48	34
10....	56	28	59	31	63	32	52	28	56	32	59	29	58	27	49	30	42	27	47	23	.....	.....	42	25	44	26	.....	.....
11....	75	29	74	37	75	32	74	34	71	42	70	30	79	33	58	22	55	18	70	25	.....	.....	58	28	51	23	57	22
12....	74	37	75	60	75	38	73	55	75	58	75	44	79	42	75	39	72	41	72	35	.....	.....	68	47	72	39	75	36
13....	64	47	77	63	85	56	74	64	76	59	77	53	68	38	71	56	70	53	72	58	.....	.....	68	58	66	56	71	56
14....	65	44	70	65	85	45	70	63	68	52	69	55	48	39	72	56	55	54	64	55	.....	.....	66	59	63	52	72	52
15....	52	43	69	63	73	51	59	59	52	47	48	44	48	42	75	59	63	47	50	47	.....	.....	62	44	66	54	76	53
16....	61	37	58	48	75	57	54	47	59	46	60	44	62	32	70	50	48	43	51	40	.....	.....	50	39	64	45	72	36
17....	72	53	74	50	74	51	71	48	74	53	64	47	69	45	66	36	55	30	73	35	.....	.....	64	41	67	39	71	38
18....	70	55	79	58	75	49	77	58	70	61	72	48	74	54	75	46	66	47	75	49	.....	.....	73	44	71	50	73	39
19....	75	59	78	66	76	51	78	64	75	63	75	55	78	57	77	55	71	54	75	60	.....	.....	72	60	75	56	72	43
20....	74	59	73	67	75	52	73	65	73	53	75	56	73	55	78	56	75	59	75	62	.....	.....	70	59	76	57	75	54
21....	74	47	80	66	76	49	78	65	72	51	74	48	74	47	77	59	74	59	76	61	.....	.....	75	63	74	59	76	52
22....	68	40	66	64	74	52	70	67	67	48	72	48	56	46	80	60	76	60	70	63	.....	.....	67	50	77	63	76	60
23....	60	37	55	50	73	49	70	48	56	41	56	40	59	34	71	53	55	46	55	42	.....	.....	52	42	68	48	71	47
24....	54	35	61	39	74	52	60	36	54	36	50	35	50	30	67	31	60	27	61	30	.....	.....	59	41	60	33	62	31
25....	55	37	59	48	75	50	54	50	55	44	54	35	60	36	61	44	53	34	56	33	.....	.....	50	43	57	39	70	35
26....	63	42	69	51	76	49	58	46	68	55	67	44	61	42	69	41	65	45	66	48	.....	.....	59	47	65	48	72	36
27....	60	49	66	58	75	47	65	54	67	60	65	46	65	36	72	52	64	51	64	52	.....	.....	66	53	68	55	64	43
28....	64	48	75	61	67	49	69	59	63	58	73	46	68	41	63	56	61	49	65	57	.....	.....	60	55	61	57	69	57
29....	65	57	62	60	64	52	66	58	64	55	64	54	61	52	65	58	61	56	68	54	.....	.....	64	57	65	58	66	58
30....	56	50	65	51	65	46	66	51	55	50	53	47	61	43	69	58	62	58	65	55	.....	.....	60	48	67	54	70	60
Mns..	62.3	43.4	68.0	52.2	69.9	46.6	65.6	50.2	62.9	48.7	63.3	44.0	62.4	40.1	68.6	44.8	61.2	41.6	63.5	44.4	.....	.....	60.5	45.4	63.5	45.3	69.1[a]	42.6[a]

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 7*—Continued.

Date.	Tennessee.				Arkansas.																		Mississippi.					
	Kenton.		Memphis.		Bentonville.		Dardanelle.§§		El Dorado.§§		Fort Smith.		Hardy.		Little Rock.		Pine Bluff.§§		Texarkana.§§		Wynne.§§		Clarksdale.§§		Corinth.§§		Greenville.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	52	25	52	35	56	32	57	36	57	37	56	41	54	28	53	35	57	34	65	42	54	31	59	32	57	30	60	35
2....	60	26	61	38	58	43	62	37	62	40	58	43	59	30	60	41	63	37	70	40	62	32	62	38	62	32	65	37
3....	68	32	67	42	64	39	72	34	77	36	64	42	70	36	67	40	71	36	78	39	69	34	72	36	70	34	73	38
4....	66	35	70	47	68	46	69	36	75	47	68	48	66	43	68	47	73	36	78	45	70	39	74	37	72	38	74	42
5....	63	30	65	42	69	45	70	41	76	48	67	48	66	35	66	47	71	42	76	52	67	40	70	44	72	40	73	50
6....	73	31	73	47	69	45	75	38	77	43	74	47	72	34	73	45	77	41	78	43	75	36	77	39	74	40	80	44
7....	69	54	72	57	66	40	76	38	77	43	73	53	74	52	72	56	77	41	77	55	74	62	77	41	70	42	81	54
8....	67	48	58	42	50	34	69	46	59	47	55	43	64	41	58	47	59	49	62	48	56	49	59	48	51	48	60	51
9....	58	32	48	35	46	28	56	37	54	35	52	36	50	30	51	37	55	36	59	38	51	33	54	35	44	34	55	39
10....	44	27	45	36	46	25	57	30	58	30	51	32	49	28	52	34	59	34	64	27	48	33	53	33	44	33	58	36
11....	51	19	57	34	66	26	68	27	70	31	65	32	56	23	64	35	67	28	75	33	68	24	64	25	57	22	69	29
12....	73	34	73	49	68	55	76	39	80	39	73	50	73	39	74	50	77	28	78	41	70	48	76	26	71	24	77	32
13....	70	34	71	55	69	63	71	55	78	46	71	61	68	52	72	60	77	49	74	55	74	57	76	46	71	40	78	47
14....	70	55	70	57	68	62	72	53	75	48	73	60	70	56	67	58	72	57	72	57	74	59	74	53	70	48	76	52
15....	72	56	74	59	62	48	80	55	79	53	70	56	71	59	74	57	79	56	80	59	79	54	76	55	71	50	77	53
16....	69	50	66	50	55	43	67	55	75	54	60	51	63	46	65	50	64	57	75	59	58	52	65	56	60	52	72	57
17....	64	33	61	43	69	45	62	47	69	57	64	52	56	35	59	46	61	51	76	60	62	38	84	47	68	44	69	55
18....	73	46	74	50	73	56	80	49	81	58	79	56	76	50	77	53	80	52	83	58	70	50	85	47	74	42	81	51
19....	76	54	72	58	74	63	70	57	72	60	77	67	67	58	70	60	72	52	78	58	70	50	79	45	74	42	80	54
20....	77	52	75	59	71	63	76	59	79	62	75	66	68	59	74	61	76	56	79	62	76	56	78	58	76	50	81	56
21....	77	57	77	60	74	63	78	64	81	63	79	66	72	59	77	65	81	63	79	65	80	52	79	58	74	52	82	57
22....	77	61	78	65	71	52	76	65	80	64	72	59	72	62	75	63	77	63	84	67	79	64	82	62	75	56	85	63
23....	74	53	67	47	56	37	62	54	71	65	62	49	63	48	64	52	63	62	70	61	63	60	67	61	66	58	79	59
24....	61	28	62	40	61	31	61	36	67	45	61	42	62	32	61	43	64	42	67	47	63	32	65	39	62	38	66	44
25....	62	33	60	45	51	46	56	40	68	41	55	48	56	43	63	46	67	42	69	45	61	43	65	39	64	36	69	39
26....	67	42	69	50	58	49	66	43	76	41	59	48	72	46	71	50	72	42	77	46	69	45	71	40	66	38	76	43
27....	70	51	69	58	69	56	65	43	66	49	65	58	64	54	64	57	71	43	75	50	73	56	73	50	72	48	75	54
28....	66	53	65	60	64	56	63	55	65	56	65	58	61	56	63	58	66	48	80	65	69	60	64	56	70	50	67	59
29....	67	57	65	59	67	56	66	59	67	61	66	60	61	58	65	60	68	57	78	60	70	60	68	60	64	50	71	60
30....	70	59	68	56	59	46	61	52	70	57	61	54	64	52	64	53	69	56	65	55	68	61	73	59	70	60	75	59
Mns..	66.9	42.2	66.1	49.2	63.2	46.6	68.0	46.0	71.4	48.5	65.7	50.9	64.6	44.8	66.1	50.2	69.5	46.3	74.0	51.1	67.4	47.0	70.7	45.5	66.4	42.4	72.8	48.3

Date.	Mississippi.						Louisiana.																			
	Kosciusko.§§		Natchez.§§		Vicksburg.		Alexandria.§§		Baton Rouge.§§		Covington.§§		Lafayette.§§		Lake Charles.§§		Monroe.§§		New Orleans.		Robeline.§§		Schriever.§§		Shreveport.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	63	32	64	37	62	37	63	34	68	39	68	41	63	41	66	36	61	35	61	45	70	29	68	40	59	43
2.....	69	32	68	40	67	41	65	39	76	45	74	44	72	42	70	39	61	40	67	50	80	33	72	44	65	44
3.....	75	38	77	46	74	47	75	41	80	51	79	47	85	50	75	40	75	41	72	54	78	31	80	48	72	42
4.....	75	39	77	52	76	57	76	42	81	55	79	52	78	52	78	46	77	41	72	59	80	38	78	54	73	54
5.....	75	46	77	54	75	51	70	55	71	53	73	51	72	56	82	47	76	50	71	57	75	42	79	53	72	56
6.....	77	43	78	55	78	55	77	48	81	51	79	51	86	52	79	49	79	45	74	60	80	41	68	54	75	50
7.....	73	45	79	55	77	62	77	48	83	64	83	55	81	57	75	32	80	46	81	63	80	51	64	48	78	57
8.....	58	51	61	53	63	45	62	51	69	52	68	58	67	54	81	30	61	51	68	53	60	39	62	45	61	45
9.....	51	35	56	40	53	39	60	37	64	37	58	45	65	39	82	32	58	38	57	48	65	24	60	38	56	39
10.....	55	30	62	27	57	35	63	30	69	33	64	29	65	33	70	31	60	34	60	42	70	30	62	30	62	35
11.....	65	23	71	31	68	37	70	30	76	35	69	29	73	37	80	34	70	33	65	47	75	32	76	32	72	40
12.....	75	30	75	39	75	47	74	35	78	39	73	33	72	42	82	.....	78	33	72	50	80	32	80	35	77	50
13.....	75	34	77	46	74	52	76	42	81	49	76	34	84	52	80	47	78	41	74	54	79	38	82	38	76	55
14.....	73	42	76	51	74	53	75	50	83	47	79	42	84	51	82	46	75	49	77	56	80	43	80	45	75	59
15.....	76	45	77	54	74	57	78	49	80	53	77	48	84	54	77	48	78	50	78	58	81	50	82	45	75	59
16.....	72	51	79	60	77	60	81	56	86	58	81	53	90	56	88	48	80	53	78	62	84	55	80	47	76	60
17.....	69	51	80	55	76	58	78	59	87	60	80	53	90	63	84	67	79	56	77	63	87	52	84	58	77	59
18.....	77	41	81	58	77	58	79	57	82	59	78	59	80	60	87	50	82	55	74	59	89	52	84	60	80	58
19.....	77	42	80	57	79	57	79	59	83	53	78	46	81	60	89	55	80	56	77	56	80	61	80	55	76	62
20.....	79	49	79	59	78	57	79	60	79	60	79	50	81	62	80	57	80	60	77	60	81	62	82	58	78	63
21.....	72	50	81	60	80	61	76	59	84	63	80	57	81	64	81	60	80	59	81	64	82	61	82	58	79	66
22.....	80	57	78	63	80	64	75	52	77	65	80	61	79	65	82	61	80	60	76	64	80	62	81	64	80	67
23.....	81	50	82	62	81	60	80	60	85	64	80	62	84	62	84	50	81	57	76	63	81	59	80	64	76	60
24.....	68	43	70	54	71	52	69	57	74	58	76	56	73	60	86	55	77	51	72	57	80	55	81	50	66	52
25.....	71	36	70	32	72	43	69	43	75	44	74	41	77	46	87	56	69	40	72	52	81	58	79	52	68	48
26.....	76	34	80	42	77	56	76	43	78	58	76	42	79	47	88	55	75	40	72	68	76	52	74	50	76	51
27.....	75	50	77	59	77	59	76	51	79	59	75	43	88	62	85	57	77	52	69	64	79	44	76	64	71	60
28.....	74	53	76	62	73	61	70	60	78	64	75	60	79	63	82	56	70	56	75	65	78	53	79	64	72	62
29.....	61	50	75	62	71	59	74	57	77	67	76	61	75	63	76	44	73	60	77	61	72	53	80	64	65	58
30.....	72	52	70	58	74	59	75	48	79	60	67	59	80	60	79	54	75	57	72	61	76	57	72	60	67	55
Mns...	71.3	42.5	74.4	50.8	73.0	52.6	73.2	48.4	78.1	53.2	75.1	48.7	78.3	53.5	80.6	47.7ᵃ	74.2	48.0	72.5	57.0	78.0	46.3	76.2	50.6	71.8	53.6

ᵃ, ᵇ, ᶜ, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 8, TEXAS AND RIO GRANDE VALLEY.

B. BUNNEMEYER, District Editor.

GENERAL SUMMARY.

November was a warm and wet month with less than the normal amount of sunshine. There was, however, a period of sunshiny days, favorable for outdoor work, from the 6th to 18th. The mean temperatures were well above the normal throughout the district, and in some localities the current month was the warmest November of record. The mean variability of temperature was remarkably small. In spite of the high monthly means there were no unusually warm days; nor were there any unusually cold days. Even at the higher mountain stations no zero weather was recorded, while in the Texas portion of the district the coldest reported was but 4° below freezing; and the greater portion of the State had no damaging frosts.

The month also ranks as one of the wettest Novembers of record, but the precipitation departures varied greatly. Over the middle Rio Pecos watershed and the eastern fourth of Texas and along the immediate Gulf coast the precipitation was deficient, while over the upper Trinity and middle portions of the Brazos, Colorado, and Guadalupe watersheds there was from two to three times the normal amount of rainfall. Good showers occurred during the first five days and daily after the 19th in some portion of the district; and at the close of the month the ground was saturated with moisture. The snowfall was heavy at the northern mountain stations, but for the district as a whole averaged less than normal. The heaviest monthly amount in Colorado was 27.2 inches at Platoro, and in New Mexico, 23.3 inches at Batesman's Ranch. There was no snow reported in Texas. The number of days with 0.01 inch or more of precipitation was greater than normal, averaging 5 in Colorado and New Mexico and 6 in Texas.

The greatest and least monthly amounts of precipitation were, respectively, in Colorado, 2.96 inches at Cumbres and 0.18 inch at Blanca; in New Mexico, 4 inches at Hermosa and 0.15 inch at Bluewater; and in Texas, 11.85 inches at Somerville and 0.15 inch at Marfa. Excessive precipitation of 2.50 inches or more in 24 consecutive hours occurred at 35 stations in Texas, the heaviest being 8.50 inches at Somerville on the 23d.

The prevailing winds were from the southwest in the western portion of the district, from the south in the middle portion, and from the southeast in the eastern.

TEMPERATURE.

The mean temperatures were above normal at all reporting stations with daily excesses averaging 3.3° in Colorado, 3.4° in New Mexico, and 5.9° in Texas. The first decade was the coldest and the second the warmest. As there were no well-defined warm or cold periods the highest and lowest temperatures occurred on mixed dates. The average daily range of temperature was small, varying from 8° on the Texas coast to 31° in portions of Colorado.

The highest and lowest temperatures reported were, respectively, in Colorado, 65° at Saguache on the 11th and 4° at Wagon Wheel Gap on the 23d; in New Mexico, 84° at Hondo Reservoir on the 6th and at Artesia on the 12th, and 9° at Virsylvia on the 23d; and in Texas, 92° at Falfurrias on the 16th and at Brighton on the 26th, and 28° at Albany and San Augustine on the 10th. The local monthly means ranged from 28.0° to 38.7° in Colorado, from 34.7° to 55.5° in New Mexico, and from 52.8° to 74.9° in Texas.

PRECIPITATION.

The precipitation over the Rio Grande watershed was generally above the normal with large excesses in Texas from Del Rio to Fort McIntosh. The average for the watershed was 1.48 inches, which is nearly double the normal amount.

The Rio Pecos watershed had a moderate excess of precipitation in its upper and lower portions and a slight deficiency in its middle portion. The average for the watershed was 1.06 inches, which is 0.21 inch greater than normal.

Of the Texas drainage areas the coastal plains and the Sabine and Neches watersheds had less than the normal rainfall, with deficiencies ranging from 0.87 inch for the coastal plains to 1.77 inches for the Sabine. The remaining drainage basins showed large excesses that ranged from 1.73 inches for the Trinity watershed to 4.02 inches for that of the Colorado. Excessive rains occurred during the last decade over a broad belt extending from the headwaters of the Trinity southwestward to the Rio Grande. The following are the average monthly amounts in inches and hundredths for the various Texas watersheds: Nueces, 4.34; San Antonio, 5.13; Guadalupe, 5.38; Lavaca, 5.20; Colorado, 5.73; Brazos, 5.61; Trinity, 4.45; Neches, 2.39; Sabine, 1.73; and coastal plains, 2.12.

RIVER CONDITIONS.

The flow of the Texas streams was much greater than normal, and the run-off for the Brazos, Colorado, and Guadalupe was with one exception the greatest for November in the last 10 years. Moderate rises occurred in the upper Trinity, middle Brazos, and middle and lower Colorado during the latter half of the first decade, due to heavy rains on the 4th and 5th. Sharp rises occurred in all the streams at the close of the month, due to a series of heavy rains that began on the 23d. The Trinity was above flood stage at Dallas from the 24th to the 27th, inclusive, reaching a maximum stage of 30.2 feet at noon of the 25th. A rise of 21 feet occurred in the Colorado at Ballinger on the 23d, which was augmented in the lower valley by heavy rains between the 27th and 30th, causing the river to reach flood stage at Columbus on the 28th and a stage of 34 feet on the 30th. The Guadalupe was above flood stage at Victoria from the 26th to 30th with a maximum stage of 22.9 feet on the 28th. No damage was reported from these freshets. A sharp rise occurred in the lower Rio Grande between the 24th and 30th.

TABLE 1.—*Climatological data for November, 1913. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Blanca	Costilla	7,865	4	35.2	.....	60	10	10	23	42	0.18	.....	0.18	0	1	21	8	1	w.	V. R. Liggett.
Cumbres	Conejos	10,015	6	.....	.....	.....	.....	.....	.....	.....	2.96	.....	1.16	25.0	8	7[f]	2[f]	15[f]	sw.	Mrs. Ida M. Lively.
Garnett	Costilla	7,576	20	34.6	+ 4.5	61	7	11	30	47	0.53	+ 0.22	0.33	2.5	3	12	7	11	nw.	Charles Speiser.
Hermit	Hinsdale	9,843	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Marion Mason.
La Veta Pass	Costilla	9,000	3	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.29	9.0	3	18	7	5	w.	Clara M. Wright.
Manassa	Conejos	7,700	7	36.0[a]	.....	63[a]	11	13[a]	23	47[a]	0.62	.....	0.42	2.0	3	15[a]	5[a]	9[a]	ne	J. B. Chapman.
Platoro	....do	9,675	6	.....	.....	.....	.....	.....	.....	.....	2.06	.....	0.58	27.2	12	15	3	12	sw.	Samuel P. Mix.
Saguache	Saguache	7,740	21	38.7	+ 5.3	65	11	13	24	46	0.30	+ 0.01	0.20	T.	2	12	1	17	w.	Eugene Williams.
San Luis	Costilla	7,794	22	35.8	+ 2.0	61	10	13	6	41	0.74	+ 0.32	0.43	6.1	3	10	16	4	sw.	P. B. Albright.
Wagon Wheel Gap Experiment Station.	Mineral	9,610	14	28.0	+ 1.5	48	9	4	23	27	1.85	+ 0.87	0.63	20.4	10	11	8	11	.....	U. S. Weather Bureau.
New Mexico.																				
Agricultural College	Dona Ana	3,863	52	51.8	+ 2.3	79	7	25	30	49	0.80	+ 0.23	0.46	0	5	18	3	9	se.	N. Mex. Agricultural College.
Alamogordo (near)	Otero	4,338	16	52.4	+ 2.2	75	7	28	5	38	1.90	+ 1.15	1.08	0	4	18	7	5	sw.	Edward Le Breton.
Alamogordo	....do	4,320	4	51.2	.....	74	7	30	5	33	1.68	.....	0.99	0	5	26	0	4	s.	Agent E. P. & S. W. R. R.
Alamos Ranch	Sandoval	7,800	3	.....	.....	.....	.....	.....	.....	.....	2.18	.....	0.80	8.0	8	17	4	9	sw.	H. H. Brook.
Albuquerque	Bernalillo	4,960	37	.....	.....	.....	.....	.....	.....	.....	0.69	+ 0.19	0.28	0	5	13	16	1	.....	Pitt Ross, C. E.
Ancho	Lincoln	6,112	4	.....	.....	.....	.....	.....	.....	.....	1.04	.....	0.45	0.5	5	.....	.....	.....	.....	Agent E. P. & S. W. R. R.
Anchor Mine	Taos	10,600	2	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.44	20.0	5	12	12	6	w.	Charles H. Brigham.
Artesia	Eddy	3,350	5	52.9	.....	84	12	23	5	52	0.88	.....	0.58	0	4	12	4	14	sw.	Will Benson, C. E.
Aspen Grove Ranch	Rio Arriba	9,000	4	.....	.....	.....	.....	.....	.....	.....	1.66	.....	0.64	18.3	5	10	20	0	.....	Junius D. Maupin.
Batemans Ranch	....do	8,900	4	.....	.....	.....	.....	.....	.....	.....	2.01	.....	0.78	23.3	6	15	8	7	w.	John W. Bateman.
Berino	Dona Ana	3,788	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. C. McNary.
Bluewater	Valencia	6,732	11	41.2	+ 3.6	67	10	11	29	51	0.15	− 0.21	0.15	T.	1	10	19	1	nw.	Bluewater Development Co.
Boaz	Chaves	4,154	4	51.8	.....	78	7	25	5	50	1.37	.....	0.66	0	5	19	5	6	sw.	William Horner.
Capitan	Lincoln	6,348	4	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.90	0.2	2	2	21	7	sw.	Agent E. P. & S. W. R. R.
Carlsbad	Eddy	3,220	18	55.5	+ 3.1	83	12	27	5	49	1.21	+ 0.48	0.54	0	4	14	6	10	se.	U. S. Reclamation Service.
Carrizozo	Lincoln	5,438	5	48.4	.....	72	9	28	6†	40	0.74	.....	0.44	0	3	18	8	4	e.	Agent E. P. & S. W. R. R.
Cerrillos (near)	Santa Fe	5,700	1	44.9	.....	70	7	21	11†	48	0.60	.....	0.31	T.	4	15	14	1	w.	Irving C. Sweet.
Chama	Rio Arriba	7,851	15	37.2	+ 0.2	64	10	15	29	37	2.65	+ 1.34	0.90	11.0	9	16	14	0	sw.	Frank C. Johnson.
Cloudcroft	Otero	8,650	11	38.7	+ 2.8	60	7	11	20	35	1.42	− 0.13	0.50	12.1	4	7	13	10	nw.	Agent E. P. & S. W. R. R.
Corona	Lincoln	6,666	4	46.6	.....	68	11†	22	4	38	0.55	.....	0.40	8.0	3	9	21	0	sw.	Do.
Coyote	....do	5,800	4	.....	.....	.....	.....	.....	.....	.....	0.85	.....	0.28	0	7	23	6	1	sw.	Do.
Cundiyo	Santa Fe	6,889	4	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.40	2.1	4	16	8	6	w.	Juan Vijil.
Demonstration Farm	San Miguel	6,800	4	.....	.....	.....	.....	.....	.....	.....	1.01	.....	0.39	0	3	.....	.....	.....	.....	W. F. Calhoun.
Dunlap	Chaves	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. H. Lewis.
Duran	Torrance	6,272	4	46.4	.....	67	10	24	4	39	0.51	.....	0.30	3.0	4	18	9	3	w.	Agent E. P. & S. W. R. R.
Elida	Roosevelt	4,345	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. J. Evans.
Escondido	Otero	4,014	4	.....	.....	.....	.....	.....	.....	.....	1.50	.....	1.50	0	1	22	5	3	w.	Agent E. P. & S. W. R. R.
Espanola	Rio Arriba	5,590	15	44.4	+ 4.9	68	8	22	30	42	1.08	+ 0.30	0.48	0	4	19	1	10	s.	Mrs. E. F. McBride.
Estancia	Torrance	6,140	8	44.4	.....	73	9	20	29	50	1.52	+ 0.82	0.75	4.2	5	17	11	2	sw.	Estancia Drug Co.
Fluorine	Socorro	7,000	.....	.....	.....	.....	.....	.....	.....	.....	1.76	.....	0.60	T.	6	16	8	6	w.	Frank P. Davis.
Fort Stanton	Lincoln	6,231	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Sanitarium.
Fort Sumner	Guadalupe	3,960	5	49.0	.....	75	6†	23	10	50	1.75	+ 0.92	0.66	0	9	17	6	7	s.	Peter Yocky.
Gallinas	Lincoln	6,635	4	.....	.....	.....	.....	.....	.....	.....	**1.32**	.....	**0.75**	**2.0**	**4**	**17**	**10**	**4**	w.	Agent E. P. & S. W. R. R.
Gallinas Planting Sta	San Miguel	7,500	6	42.8[b]	.....	73[b]	18	20[b]	30	43[b]	0.52	.....	0.33	4.0	4	22	3	5	e.	U. S. Forest Service.
Glorieta Ranch	Socorro	6,300	3	51.0	.....	78	7	33	29	31	1.67	.....	0.56	0	7	13	12	5	s.	Chas. M. Crossman.
Harveys Upper Ranch	San Miguel	9,400	4	37.8	.....	57	18	18	4	32	1.19	.....	0.48	17.0	5	16	7	7	w.	R. B. Shoonmaker.
Hermosa	Sierra	.....	.....	.....	.....	60	2†	18	5	....	4.00	.....	1.75	0	4	14	7	9	sw.	W. H. MacDonald.
Hobbs	Eddy	3,800	....	51.7	.....	78	6	21	9	47	1.43	.....	0.59	0	8	14	8	8	sw.	E. H. Byers.
Hondo Reservoir	Chaves	3,904	4	51.3	.....	84	6	22	5	57	1.03	.....	0.81	0	4	15	8	7	se.	U. S. Reclamation Service.
Jemez Springs	Sandoval	6,100	3	43.5	.....	63	6	26	29	31	2.08	.....	1.00	1.0	5	10	6	14	sw.	Mrs. L. L. Shields.
Knowles (near)	Eddy	4,300	3	51.8	.....	79	13	27	5	44	1.56	.....	0.55	0	6	12	6	12	sw.	J. W. Mosley.
Laguna	Valencia	5,840	8	45.6	.....	75	9	24	12†	46	0.28	− 0.53	0.28	T.	1	.....	.....	.....	.....	Guss Weiss.
Lagunita	Guadalupe	4,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. A. Turnbull.
Lake Valley	Sierra	5,412	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William P. Keil.
Lakewood (near)	Eddy	3,170	1	54.0	.....	80	11†	27	9†	47	0.85	.....	0.70	0	2	18	5	7	se.	Mrs. J. K. Boyd.
Lanark	Dona Ana	4,156	14	.....	.....	.....	.....	.....	.....	.....	0.55	− 0.07	0.50	0	5	16	8	6	nw.	Agent S. Pac. R. R.
Las Vegas	San Miguel	6,385	26	43.2	+ 2.7	70	10†	16	4	47	0.63	− 0.12	0.35	0.5	5	14	11	5	w.	New Mexico Normal Univ.
Los Lunas (near)	Valencia	4,900	24	46.3	+ 4.1	73	7	23	10†	45	1.04	+ 0.57	0.33	0	6	10	19	1	.....	Richard Pohl.
Magdalena	Socorro	6,556	8	45.2	.....	68	7	25	29†	33	1.36	+ 0.47	0.38	T.	7	15	12	2	w.	William Pender.
Mescalero	Otero	6,627	2	43.5	.....	70	7	20	21	38	1.89	.....	0.91	1.6	5	21	4	5	sw.	Rev. R. H. Harper.
Mineral Hill	San Miguel	7,050	8	.....	.....	.....	.....	.....	.....	.....	1.72	.....	1.20	2.0	4	5	22	3	sw.	W. M. Nelson.
Monterey	Otero	4,436	4	.....	.....	.....	.....	.....	.....	.....	1.47	.....	0.73	0	5	22	5	3	.....	Agent E. P. & S. W. R. R.
Moriarty	Torrance	6,204	.....	.....	.....	.....	.....	.....	.....	.....	2.15	.....	0.80	7.0	5	24	2	4	.....	Harry J. Fincke.
Mountainair (near)	....do	6,390	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Julia Hill.
Mountain Park	Otero	7,100	1	.....	.....	.....	.....	.....	.....	.....	1.76	.....	0.52	2.0	7	18	6	6	w.	Charles E. Beasley.
Newman	....do	3,989	4	.....	.....	.....	.....	.....	.....	.....	1.16	.....	0.68	0	4	20	3	7	e.	Agent E. P. & S. W. R. R.
Nogal (near)	Lincoln	8,000	.....	.....	.....	.....	.....	.....	.....	.....	1.18	.....	0.53	6.4	6	15	11	4	w.	H. E. Kellar.
Noria	Dona Ana	4,114	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent E. P. & S. W. R. R.
Orogrande	Otero	4,171	4	.....	.....	.....	.....	.....	.....	.....	1.42	.....	0.88	0	5	15	8	7	.....	Do.
Oscura	Lincoln	5,016	4	.....	.....	.....	.....	.....	.....	.....	1.53	.....	0.64	0	5	.....	.....	.....	.....	Eugene F. Jones.
Otis	Eddy	3,100	4	.....	.....	.....	.....	.....	.....	.....	0.89	.....	0.31	0	6	15	5	10	se.	A. M. Hove.
Pastura	Guadalupe	5,285	4	.....	.....	.....	.....	.....	.....	.....	1.15	.....	0.58	3.0	3	15	9	6	sw.	Agent E. P. & S. W. R. R.
Plainview (near)	Chaves	4,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. P. Adair.
Red River Canyon	Taos	8,956	6	38.8	.....	70	4†	15	27	52	0.80	.....	0.30	14.0	5	9	18	3	w.	Mrs. L. R. Penn.
Richland	Chaves	.....	.....	47.9	.....	74	13†	24	5	42	2.84	.....	1.50	0	3	19	2	9	w.	K. H. Embree.
Rincon	Dona Ana	4,030	19	52.5	+ 3.5	77	11	25	5†	49	1.14	+ 0.66	0.69	0	3	11	11	8	se.	Charles H. Raitt.
Rio Grande Dam	Sierra	4,265	23	53.4	+ 6.8	80	6	30	30	43	2.01	+ 1.65	0.71	0	6	12	11	7	sw.	U. S. Reclamation Service.
Rio Grande Industrial School.	Bernalillo	5,000	2	45.8	.....	70	7†	23	9†	45	0.65	.....	0.36	0	2	14	9	7	sw.	Rev. A. C. Heyman.
Rosedale	Socorro	6,910	8	43.6	.....	70	9	22	29	42	1.97	.....	0.60	T.	5	15	8	7	w.	Mrs. J. J. MacInness.
Roswell	Chaves	3,578	19	50.8	+ 2.7	78	6	26	5	48	0.97	− 0.19	0.78	0	7	11	9	10	s.	U. S. Weather Bureau.
San Marcial	Socorro	4,454	16	49.3	+ 2.5	73	8	23	7	48	1.46	+ 0.92	0.64	0	4	21	6	3	.....	Agent A. T. & S. F. R. R.
San Rafael	Valencia	6,509	16	43.8	+ 2.3	75	2	22	11	47	0.58	+ 0.05	0.27	0.2	4	10	9	11	se.	Dr. Charles M. Grover.
Santa Fe	Santa Fe	7,013	40	42.4	+ 4.2	63	10	26	21	27	1.75	+ 0.97	0.58	2.0	7	11	14	5	n.	Section Center.
Santa Fe Canyon	....do	8,000	3	.....	.....	.....	.....	.....	.....	.....	2.11	.....	0.75	7.5	7	15	13	2	nw.	Mrs. E. M. Gregory.
Santa Rosa	Guadalupe	4,624	12	50.0	.....	75	10	27	23	45	1.03	+ 0.60	0.46	T.	4	22	5	3	w.	H. V. B. Smith.
Senorito (near)	Sandoval	8,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James Curry.
Socorro	Socorro	4,600	21	50.4	+ 4.7	76	5	23	9	46	0.83	+ 0.28	0.35	0	5	24	4	2	se.	J. J. Leeson.
Stanley	Santa Fe	6,317	4	41.8[d]	.....	68[d]	10	16[d]	30	46[d]	1.00	.....	0.80	.....	2	15	0	15	w.	D. C. Kinsell.
Tajique (near)	Torrance	9,820	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Rea.
Taos	Taos	6,983	18	42.0	+ 3.4	65	11	21	30	41	1.13	+ 0.46	0.40	T.	6	12	15	3	w.	Alexander Gusdorf.
Taos Canyon	....do	8,959	4	.....	.....	.....	.....	.....	.....	.....	1.26	.....	0.36	7.2	6	11	6	13	.....	L. Martinez, jr.

TABLE 1.—*Climatological data for November, 1913. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New Mexico—Contd.																				
Tecolote	Lincoln	6,539	4	44.6	.....	64	7	28	3†	36	0.57	.....	0.25	0.6	7	16	7	7	w.	Agent E. P. & S. W. R. R.
Three Rivers	Otero	4,559	4	.....	.....	.....	.....	.....	.....	.....	1.11	.....	0.56	0	4	22	4	4	sw.	Do.
Tijeras Canyon	Bernalillo	6,450	3	.....	.....	.....	.....	.....	.....	.....	1.59	.....	0.64	T.	6	13	12	5	sw.	U. S. Forest Service.
Torrance	Torrance	6,433	4	.....	.....	.....	.....	.....	.....	.....	0.63	.....	0.51	3.0	3	11	13	6	s.	Agent E. P. & S. W. R. R.
Tres Piedras	Taos	8,076	10	37.2	.....	62	11	15	30	36	2.17	+ 1.01	0.45	15.0	6	11	12	7	sw.	U. S. Forest Service.
Truchas	Rio Arriba	7,935	4	40.0	.....	72	1	20	6	43	1.45	.....	0.90	12.0	5	12	14	4	s.	Miss T. Esquibel.
Tularosa	Otero	4,436	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Irby L. Fairless.
Vaughn	Guadalupe	5,952	4	.....	.....	.....	.....	.....	.....	.....	0.95	.....	0.60	8.0	2	16	10	4	sw.	Agent E. P. & S. W. R. R.
Virsylvia	Taos	7,500	3	34.7[a]	.....	70[1]	3†	9	23[b]	52[1]	.....	.....	.....	.....	.....	12	6	12	s.	Ernest F. Kennedy.
Willard	Torrance	6,086	1	44.9	.....	71	1†	17	30	50	1.06	.....	0.52	5.5	6	14	8	8	sw.	Dr. V. S. Cheyney.
Winsors	San Miguel	8,200	17	38.6	+ 4.4	60	5†	16	4	43	1.35	+ 0.16	0.55	15.0	4	11	16	3	sw.	James F. Matty.
Texas.																				
Abilene	Taylor	1,738	28	58.7	+ 6.1	78	19	37	9	32	5.82	+ 4.58	1.92	0	10	7	6	17	s.	U. S. Weather Bureau.
Albany	Shackelford	1,429	19	56.5	+ 3.8	80	12†	28	10	37	6.77	+ 5.19	2.30	0	7	16	4	10	.....	N. L. Bartholomew.
Alice	Jim Wells	209	2	70.8	.....	85	13†	36	9	44	1.15	.....	0.90	0	2	8	4	18	se.	R. M. Boerum.
Alpine	Brewster	4,482	3	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.30	0	1	22	0	8	w.	H. B. Cowles.
Alvin	Brazoria	49	15	63.0	.....	82	17	36	9	29	2.80	− 1.34	1.90	0	3	11	14	5	e.	Alvin Japanese Nursery.
Anahuac	Chambers	23	4	.....	.....	.....	.....	.....	.....	.....	1.39	.....	1.07	0	2	.....	.....	.....	.....	Lone Star Canal Co.
Angleton	Brazoria	.....	.....	65.9	.....	84	16	37	9	29	4.58	.....	1.96	0	5	2	25	3	s.	N. E. Winters.
Antelope	Jack	.....	2	.....	.....	.....	.....	.....	.....	.....	5.30	.....	1.64	0	6	8	7	15	.....	Paul Rudolph.
Aspermont	Stonewall	.....	2	.....	.....	.....	.....	.....	.....	.....	4.02	.....	1.57	0	3	8	2	20	sw.	Bryant Link Co.
Austin	Travis	593	57	65.6	+ 7.4	82	22	40	9	33	4.56	+ 2.03	2.00	0	8	7	8	15	se.	A. Deussen.
Ballinger	Runnels	1,637	17	60.1	+ 5.6	87	13	34	9	37	8.75	+ 7.33	4.00	0	9	8	1	21	s.	E. M. Eubank.
Barstow	Ward	2,573	6	54.4	.....	86	13†	29	8	46	0.85	.....	0.45	0	2	14[b]	6[b]	8[b]	se.	F. P. Ingerson.
Bay City	Matagorda	53	3	63.4[a]	.....	80	.....	43	10	29[a]	7.20	.....	3.69	0	3	17	0	13	.....	E. Q. Quereau.
Beaumont	Jefferson	29	12	67.8	+ 2.9	85	16†	43	9†	30	5.17	+ 1.16	3.02	0	4	20	0	10	se.	John Bender.
Beeville	Bee	225	17	69.9	+ 6.8	86	16	42	10	37	3.97	+ 1.69	1.61	0	10	6	2	22	se.	Geo. E. Faupel.
Big Spring	Howard	2,396	15	56.8	+ 3.2	81	12	31	9	40	1.89	+ 0.44	0.57	0	8	9	9	12	s.	B. Reagan.
Blanco	Blanco	1,350	17	65.8	+ 8.8	87	21	33	10	41	4.92	+ 2.69	1.10	0	10	14	8	8	s.	R. C. Crist.
Boerne	Kendall	1,412	21	62.6	+ 5.7	84	7	31	8†	45	8.03	+ 5.31	2.11	0	16	7	9	14	s.	F. W. Schweppe.
Booth	Fort Bend	81	12	.....	.....	.....	.....	.....	.....	.....	4.34	+ 1.10	1.70	0	5	19	0	11	se.	T. R. Booth.
Bowie	Montague	1,113	18	60.4	+ 5.6	80	13†	35	10	34	6.64	+ 4.16	2.30	0	9	8	3	19	s.	Craig Anderson.
Brazoria	Brazoria	25	24	68.2	+ 5.4	84	16	39	9	39	6.93	+ 3.11	3.59	0	9	21	5	4	se.	Mrs. M. A. Stevens.
Brazos	Palo Pinto	801	4	.....	.....	.....	.....	.....	.....	.....	7.25	.....	2.00	0	6	10	0	20	s.	L. W. Boyett.
Brenham	Washington	350	28	65.6	+ 4.6	81	16†	42	9	29	9.50	+ 5.74	3.72	0	10	8	3	19	se.	Mrs. B. F. Sloan.
Bridgeport	Wise	754	4	.....	.....	.....	.....	.....	.....	.....	6.31	.....	2.10	0	8	2	7	21	n.	Claude Strange.
Brighton	Nueces	12	20	74.9	+ 8.5	92	26	37	10	47	1.29	− 1.06	0.60	0	4	19	9	2	se.	G. H. Ritter.
Brownsville	Cameron	38	49	71.7	+ 4.2	85	4	44	10	33	0.64	− 1.56	0.58	0	2	.....	.....	.....	se.	U. S. Weather Bureau.
Brownwood	Brown	1,342	21	61.1	+ 7.8	82	21	33	8	43	9.83	+ 8.20	2.90	0	11	10	2	18	s.	Mrs. Pearl Smith.
Bryan	Brazos	.....	.....	65.9	.....	83	15	40	9	34	4.59	.....	1.35	0	6	6	11	13	s.	Jno. Daly, jr.
Buena Vista	Pecos	.....	1	.....	.....	.....	.....	.....	.....	.....	1.36	.....	0.73	0	4	19	0	11	.....	W. H. Denis.
Cameron	Milam	.....	5	66.1	.....	85	15	37	8	34	4.73	.....	1.56	0	10	20	3	7	s.	J. E. Watts.
Carmona	Polk	330	5	63.7	.....	81	16†	30	10	45	2.23	.....	1.80	0	4	9[a]	17[a]	3[a]	s.	M. S. Spitler.
Carrizo Springs	Dimmit	.....	1	67.6	.....	85	27	36	10	42	1.70	.....	0.65	0	3	14	0	16	se.	M. E. Cook.
Claytonville	Fisher	2,100	18	57.6	+ 4.9	80	10	38	9	33	3.15	+ 1.62	1.02	0	6	11	3	16	s.	Wm. Lanius.
Cleburne	Johnson	758	8	63.1	.....	83	21	35	9	34	5.06	.....	2.37	0	9	9	2	19	sw.	W. S. Ownsby.
Clifton	Bosque	671	2	.....	.....	.....	.....	.....	.....	.....	7.59	.....	2.48	0	11	7	13	10	s.	R. M. Jones.
Coleman	Coleman	1,710	19	61.8	+ 7.1	82	17†	36	10	39	10.10	+ 8.50	4.01	0	8	6	15	9	s.	J. E. Stevens.
College Station	Brazos	308	23	65.1	+ 6.7	82	16†	40	2†	35	4.74	+ 0.90	1.22	0	14	6	5	19	s.	Prof. G. S. Fraps.
Colorado	Mitchell	2,066	19	65.2	+11.4	86	5	36	27	38	2.75	+ 1.28	1.90	0	2	.....	.....	.....	.....	R. M. Webb.
Columbus	Colorado	206	9	.....	.....	.....	.....	.....	.....	.....	6.84	.....	1.40	0	10	9	5	16	ne.	Mrs. Sophie Bridge.
Comanche	Comanche	1,358	7	62.6	.....	80	12†	40	9†	31	10.19	.....	2.00	0	12	10	3	17	.....	W. T. Nabers.
Corpus Christi	Nueces	20	26	69.0	+ 5.6	80	7	46	10	24	2.32	− 0.09	2.07	0	5	4	16	10	se.	U. S. Weather Bureau.
Corsicana	Navarro	445	24	61.8	+ 5.8	80	16†	38	10†	37	2.92	− 0.34	1.10	0	7	9	2	19	s.	D. H. Winn.
Cotulla	La Salle	425	6	.....	.....	.....	.....	.....	.....	.....	3.10	.....	1.50	0	4	.....	.....	.....	.....	Holland Agricultural Co.
Crockett	Houston	350	9	65.8	.....	82	22	37	9†	33	2.40	.....	1.90	0	4	16	9	5	s.	A. M. Rencher.
Cuero	DeWitt	177	23	69.1	+ 6.7	87	25	37	9	47	6.65	+ 3.61	2.49	0	9	16	2	12	s.	H. R. Frobese.
Dallas	Dallas	466	24	62.9	+ 8.3	80	21	36	10	33	3.75	+ 0.79	1.94	0	12	5	11	14	se.	U. S. Weather Bureau.
Danevang	Wharton	145	17	66.5	+ 3.5	85	17	38	1	32	4.70	+ 0.80	2.45	0	3	22	4	4	e.	H. P. Hermansen.
Del Rio	Valverde	952	7	63.4	+ 4.1	80	16	35	9	40	4.54	+ 2.76	2.33	0	11	7	8	15	se.	U. S. Weather Bureau.
Denton	Denton	621	.....	59.4	.....	81	22	31	10	36	5.81	.....	3.25	0	10	8	5	17	s.	T. W. Buell.
Devine	Medina	653	3	65.4	.....	84	16†	36	6	34	5.23	.....	2.20	0	8	13	6	11	se.	M. A. Keller.
Dialville	Cherokee	575	10	63.8	+ 5.7	82	22	33	5†	44	1.30	− 1.32	1.20	0	2	7	11	12	s.	J. M. B. McKnight.
Dilley	Frio	569	3	.....	.....	.....	.....	.....	.....	.....	2.00	.....	2.00	0	1	.....	.....	.....	.....	John W. Miller.
Dublin	Erath	1,466	17	58.9	+ 3.5	88	21	34	9	41	8.65	+ 6.87	2.25	0	10	7	7	16	s.	Jno. O. Shafer.
Duval	Travis	820	24	64.5	+ 4.4	80	21	41	1	30	6.17	+ 3.68	2.93	0	6	14	5	11	se.	J. C. Edgar.
Eagle Pass	Maverick	800	36	65.6	+ 4.5	87	16	34	9	46	3.58	+ 2.48	3.06	0	4	12	13	5	se.	Charles Tarver.
Eastland	Eastland	1,420	6	58.2	.....	80	21	32	9†	41	7.67	.....	1.90	0	7	6	1	23	s.	James A. Beard.
Edna	Jackson	71	4	.....	.....	.....	.....	.....	.....	.....	5.13	.....	2.70	0	3	.....	.....	.....	.....	E. L. Faires.
El Paso	El Paso	3,762	34	54.8	+ 3.9	77	7	32	30	33	0.97	+ 0.38	0.80	0	4	18	8	4	nw.	U. S. Weather Bureau.
Fairland	Burnet	1,000	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. L. Bush.
Falfurrias	Brooks	.....	5	71.0	.....	92	16	33	9†	49	1.70	.....	1.35	0	4	17	11	2	se.	W. A. Gardner.
Flatonia	Fayette	465	5	67.0	.....	83	16†	40	9	33	5.56	.....	1.70	0	13	14	14	2	s.	Fred W. Laux.
Flint	Smith	483	3	63.8	.....	81	22	33	10	38	1.43	.....	1.12	0	4	12	5	13	sw.	F. C. C. Carter.
Fort Clark	Kinney	1,050	42	62.2	+ 2.7	79	12	36	1	34	4.80	+ 3.36	3.50	0	4	15	1	14	se.	Post Hospital.
Fort Davis	Jeff Davis	5,000	34	.....	.....	.....	.....	.....	.....	.....	0.97	+ 0.37	0.47	0	3	.....	.....	.....	.....	C. H. Bird.
Fort McIntosh	Webb	460	45	69.7	+ 6.3	90	8	30	1†	56	1.28	+ 0.26	1.02	0	3	13	13	4	s.	Post Hospital.
Fort Stockton	Pecos	3,050	16	59.6	+ 6.4	87	12	33	5	44	0.93	+ 0.21	0.32	0	5	10	17	3	s.	H. H. Butz.
Fort Worth	Tarrant	670	18	62.4	+ 7.3	82	21	38	10	28	5.90	+ 4.33	3.44	0	13	6	8	16	s.	U. S. Weather Bureau.
Fowlerton	La Salle	.....	.....	69.6	.....	89	16	34	9	45	5.80	.....	5.00	0	3	15	9	6	se.	W. B. Patton.
Fredericksburg	Gillespie	1,742	24	63.0	+ 7.0	81	7	34	9	36	5.16	+ 2.73	2.02	0	10	7	14	9	s.	Arthur Striegler.
Gail	Borden	.....	1	55.1	.....	73	7	36	10	30	3.35	.....	1.50	0	4	18	0	12	s.	J. D. Brown.
Gainesville	Cooke	738	23	61.2	+ 8.5	79	21	34	10	33	8.54	+ 6.27	3.73	0	8	.....	.....	.....	.....	B. F. Mitchell.
Galveston	Galveston	69	42	66.4	+ 3.5	76	16	47	9	18	2.49	− 1.53	1.64	0	5	13	12	5	se.	U. S. Weather Bureau.
Garden City	Glasscock	.....	1	.....	.....	.....	.....	.....	.....	.....	.93	.....	0.96	0	8	10	4	16	s.	C. W. Cunningham.
Gatesville	Coryell	795	9	64.0	.....	80	21†	38	9	33	7.58	.....	2.25	0	8	17	5	8	.....	John Ryan.
Georgetown	Williamson	750	18	63.0	+ 5.1	82	21	37	2†	33	6.08	+ 3.12	2.65	0	8	10	7	13	s.	Prof. R. F. Young.
Goliad	Goliad	164	1	.....	.....	.....	.....	.....	.....	.....	5.66	.....	2.20	0	10	.....	.....	.....	.....	W. B. Campbell.
Gonzales	Gonzales	299	8	.....	.....	.....	.....	.....	.....	.....	5.08	.....	2.22	0	10	10	0	20	s.	J. M. Johnson.
Goree	Knox	.....	1	.....	.....	.....	.....	.....	.....	.....	4.00	.....	1.14	0	11	9	8	13	s.	R. L. Gaines.
Gorham	McLennan	444	4	.....	.....	.....	.....	.....	.....	.....	6.21	.....	2.14	0	5	10	9	11	s.	John Gorham.
Graham	Young	1,040	14	61.6	+ 8.2	83	21†	33	9	40	5.98	+ 3.87	1.31	0	11	8	9	13	s.	C. W. Johnson.
Grand Falls	Ward	.....	3	.....	.....	.....	.....	.....	.....	.....	1.50	.....	1.05	0	2	9	19	2	.....	W. A. White.
Grand Saline	Van Zandt	399	3	.....	.....	.....	.....	.....	.....	.....	1.28	.....	0.85	0	3	18	8	4	se.	Jas. Kirk.

TABLE 1.—*Climatological data for November, 1913. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Texas*—Continued.**																			
Grapevine	Tarrant	670	23	62.0[e]	+ 5.8	89	21	37	10	39	6.27	+ 3.63	4.25	0	5	3[e]	8[e]	14[e]	s.	W. J. Crowley.
Greenville	Hunt	550	13	62.7	+ 6.5	80	17†	37	1	34	2.60	− 0.73	1.20	0	3	5	0	25	n.	Mrs. L. A. Regan.
Hallettsville	Lavaca	235	21	67.3	+ 5.5	85	4	41	9	28	5.26	+ 2.26	1.40	0	8	10	7	13	s.	Dr. J. E. Lay.
Hamlin	Jones	1,685	2	.....	.....	.....	.....	.....	.....	.....	5.42	.....	1.52	0	5	.....	.....	.....	.....	W. S. Carruthers.
Harlingen	Cameron	37	2	71.6	.....	89	29	41	10	36	0.18	.....	0.10	0	8	19	10	1	se.	Lindsay Waters.
Harper	Gillespie	.....	2	.....	.....	.....	.....	.....	.....	.....	6.01	.....	1.96	0	6	11	0	19	s.	D. C. Barker.
Haskell	Haskell	1,553	18	59.5	+ 6.0	82	20	40	1†	25	4.41	+ 2.94	1.14	0	7	10	1	19	s.	P. D. Sanders.
Hebbronville	Duval	.....	6	.....	.....	.....	.....	.....	.....	.....	0.90	.....	0.39	0	3	.....	.....	.....	.....	Henry Edds.
Hempstead	Waller	254	9	.....	.....	.....	.....	.....	.....	.....	4.03	.....	2.10	0	5	10	0	20	e.	J. H. Hancock.
Henderson	Rusk	500	4	.....	.....	.....	.....	.....	.....	.....	1.33	.....	1.08	0	2	13	10	7	.....	M. Kangerga.
Hewitt	McLennan	664	18	.....	.....	.....	.....	.....	.....	.....	5.43	+ 2.71	1.76	0	6	.....	.....	.....	.....	I. H. Earle.
Hico	Hamilton	.....	2	.....	.....	.....	.....	.....	.....	.....	8.98	.....	3.33	0	9	8	0	22	s.	John A. Eakins.
Hillsboro	Hill	628	10	63.0	.....	81	16†	33	8	33	3.03	+ 1.26	1.20	0	8	.....	.....	.....	.....	Thompson & Campbell.
Hondo	Medina	901	14	65.7	+ 5.2	80	13†	41	9	32	4.99	+ 3.26	2.10	0	7	8	13	9	se.	H. E. Haass.
Houston	Harris	138	23	67.2	+ 6.3	82	16	43	9	26	2.31	− 1.21	1.40	0	5	10	13	7	se.	U. S. Weather Bureau.
Huntsville	Walker	400	29	64.3	+ 5.1	80	20	37	1†	38	2.44	− 1.36	1.93	0	2	6[e]	0[e]	21[e]	se.	W. Y. Barr.
Jayton	Kent	.....	3	.....	.....	.....	.....	.....	.....	.....	2.70	.....	0.90	0	5	11	0	19	s.	Wichita Valley R. R. Co.
Jewett	Leon	496	9	63.6	.....	82	13†	36	11	43	2.75	.....	1.30	0	4	12	12	6	s.	Earle Adkisson.
Junction	Kimble	1,645	12	63.8	.....	88	15	30	9	32	7.75	+ 6.27	2.25	0	7	.....	.....	.....	.....	Judge John S. Durst.
Kaufman	Kaufman	448	14	63.5	+ 5.7	80	22	35	10	33	1.71	− 1.34	0.79	0	4	9	15	6	se.	B. J. Hubbard.
Kermit	Winkler	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Preist.
Kerrville	Kerr	1,650	17	63.2	+ 5.8	85	8†	29	10	47	6.27	+ 3.29	2.12	0	8	5	12	13	s.	Robert E. Horne.
Knickerbocker	Tom Green	2,050	9	60.8	.....	85	22	32	3	44	4.56	.....	2.35	0	8	14	9	7	s.	Jos. Tweedy.
Kopperl	Bosque	576	16	.....	.....	.....	.....	.....	.....	.....	6.70	+ 3.85	3.10	0	6	8	5	17	s.	T. A. Johnson.
Lagrange	Fayette	276	3	.....	.....	.....	.....	.....	.....	.....	4.43	.....	1.08	0	14	11	5	14	se.	August Hermes.
Lamesa	Dawson	2,500	3	.....	.....	.....	.....	.....	.....	.....	3.04	.....	1.90	0	4	.....	.....	.....	.....	S. D. Austin.
Lampasas	Lampasas	1,026	21	63.5	+ 7.1	83	22	32	1	38	6.71	+ 4.56	1.68	0	8	13	0	17	s.	Mrs. K. I. Webber.
Lapara	Willacy	38	11	.....	.....	.....	.....	.....	.....	.....	1.25	− 0.76	0.60	0	3	.....	.....	.....	.....	John G. Kenedy.
Laredo	Webb	421	.....	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.81	0	5	.....	.....	.....	.....	Elizabeth C. Gilmore.
Laureles Ranch	Neuces	20	13	.....	.....	.....	.....	.....	.....	.....	0.52	− 1.80	0.52	0	1	.....	.....	.....	.....	Matt Cody.
Liberty	Liberty	38	9	66.3	.....	87	11	36	2	38	4.28	.....	1.90	0	5	15	6	9	se.	Mrs. Fannie Sneed.
Llano	Llano	1,040	22	63.4	+ 5.6	82	7†	39	9†	35	6.03	+ 4.70	2.50	0	9	5	16	9	ne.	E. W. Torrence.
Llano Grande	Hidalgo	86	5	69.0	.....	87	3†	36	9	45	0.89	.....	0.74	0	2	7	22	1	se.	M. D. Wardlow.
Long Lake	Anderson	229	8	.....	.....	.....	.....	.....	.....	.....	2.05	.....	1.00	0	3	10	4	16	s.	Geo. W. Ellis.
Longview	Gregg	336	27	62.4	+ 6.1	79	17†	33	10†	40	1.19	− 2.91	0.78	0	3	19	0	11	se.	C. A. Propst.
Lubbock	Lubbock	.....	2	53.6	.....	84	7	31	8	42	1.54	.....	0.58	0	9	13	5	12	sw.	V. L. Cory.
Lufkin	Angelina	325	6	64.8	.....	82	21	32	10	41	1.86	.....	1.85	0	2	23	2	5	s.	T. A. King.
Luling	Caldwell	418	24	67.6	+ 7.4	83	21	40	9	34	5.94	+ 3.52	2.55	0	13	6	12	12	s.	John Carter.
McGregor	McLennan	713	3	.....	.....	.....	.....	.....	.....	.....	5.80	.....	1.85	0	4	23	0	7	s.	W. H. Whitley.
McKinney	Collin	612	11	62.4	.....	81	21†	33	10	38	4.77	+ 1.59	1.82	0	9	5	4	21	s.	H. Killingsworth.
Marathon	Brewster	4,043	3	54.2	.....	80	7	31	30	40	0.42	.....	0.32	0	2	20	6	4	e.	Rev. A. P. Willis.
Marble Falls	Burnett	771	5	.....	.....	.....	.....	.....	.....	.....	4.50	.....	1.00	0	7	11	0	19	s.	M. M. Berry.
Marfa	Presidio	.....	5	.....	.....	.....	.....	.....	.....	.....	0.15	.....	0.15	0	1	.....	.....	.....	.....	W. L. Jones.
Marshall	Harrison	375	12	63.2	.....	87	21	29	10	36	1.12	− 1.96	0.88	0	2	6	17	7	s.	Lee Scott.
Matagorda	Matagorda	12	3	.....	.....	.....	.....	.....	.....	.....	4.12	.....	2.20	0	5	23	3	4	s.	W. E. McNabb.
Mexia	Limestone	537	9	62.5	.....	81	22	38	1†	36	2.99	.....	1.10	0	6	6	13	11	s.	Isidore Newman.
Midland	Midland	.....	10	55.2	.....	80	12	32	9	42	4.49	+ 3.94	1.83	0	7	4[e]	10[e]	13[e]	se.	A. G. Graham.
Mission	Hidalgo	140	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Roy Conway.
Mont Belvieu	Chambers	65	3	.....	.....	.....	.....	.....	.....	.....	2.19	.....	1.48	0	5	10[f]	11[f]	2[f]	s.	A. R. Shearer.
Montell	Uvalde	.....	1	.....	.....	.....	.....	.....	.....	.....	7.32	.....	2.16	0	12	6	5	19	s.	A. G. Beecroft.
Mount Blanco	Crosby	2,750	24	53.1	+ 3.8	78	12	32	9	38	4.16	+ 2.80	2.00	0	3	12	3	15	sw.	Geo. W. Smith.
Nacogdoches	Nacogdoches	271	14	63.0	+ 4.6	81	22	31	10	43	2.75	− 1.79	1.42	0	3	17	11	2	s.	Miss Mary Hofmann.
New Braunfels	Comal	720	24	66.0	+ 6.6	81	16†	41	9	32	6.60	+ 4.41	3.08	0	8	7	17	6	s.	J. Giesecke.
Palestine	Anderson	510	31	64.4	+ 7.5	81	22	41	9	29	1.23	− 2.40	0.69	0	7	10	7	13	s.	U. S. Weather Bureau.
Panter	Hood	1,000	24	.....	.....	.....	.....	.....	.....	.....	7.63	+ 5.30	2.00	0	10	.....	.....	.....	.....	E. H. Snider.
Pearsall	Frio	629	3	.....	.....	.....	.....	.....	.....	.....	4.96	.....	3.71	0	5	.....	.....	.....	.....	Earnest De Vilbiss.
Pierce	Wharton	102	7	69.4	.....	83	23	48	1	26	7.23	.....	2.08	0	6	7	0	23	s.	R. B. Pointer.
Plainview	Hale	3,370	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. F. Sander.
Port Lavaca	Calhoun	20	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. H. Bickford.
Post	Garza	2,700	3	.....	.....	.....	.....	.....	.....	.....	2.59	.....	0.80	0	7	8	4	18	s.	W. T. Mann.
Putnam	Callahan	1,591	2	.....	.....	.....	.....	.....	.....	.....	7.25	.....	2.50	0	6	13	0	17	se.	S. M. Davis.
Raymondville	Cameron	.....	2	70.8	.....	88	21†	34	10	46	2.01	.....	1.33	0	6	11	14	5	se.	C. H. Pease.
Ricardo	Neuces	57	4	70.0	.....	88	23	35	9†	46	1.33	.....	0.80	0	2	12	6	12	se.	J. S. Lehman.
Rio Grande	Starr	.....	36	.....	.....	.....	.....	.....	.....	.....	1.60	+ 0.77	0.90	0	3	12	10	8	se.	D. N. Garza.
Riverside	Walker	169	9	.....	.....	.....	.....	.....	.....	.....	2.00	.....	1.85	0	2	14	0	16	n.	Mrs. C. W. Higdon.
Rockland	Tyler	136	9	.....	.....	.....	.....	.....	.....	.....	2.78	.....	0.80	0	3	8	8	14	s.	Mack Dunkin.
Rockport**	Aransas	12	12	68.8	+ 5.2	78	12†	45	10	23	1.76	− 1.16	1.40	0	4	13	14	3	e.	Mrs. G. B. Grewe.
Rossville	Atascosa	558	6	64.8	.....	78	7†	37	8	37	5.50	.....	3.25	0	13	10	13	7	se.	W. F. M. Ross.
Runge	Karnes	308	18	.....	.....	.....	.....	.....	.....	.....	3.96	+ 1.91	1.51	0	3	.....	.....	.....	.....	Reiffert & Frobese.
Sabinal	Uvalde	964	9	65.8	.....	81	13†	36	8	29	4.29	.....	2.43	0	7	15	5	10	se.	H. W. Reily.
Salado	Bell	.....	3	.....	.....	.....	.....	.....	.....	.....	5.45	.....	2.45	0	5	9	6	15	s.	L. M. Crockett.
San Angelo	Tom Green	1,847	22	60.0	+ 7.5	83	15†	32	3	44	7.02	+ 5.71	3.15	0	8	19	4	7	s.	Sam Crowther.
San Antonio	Bexar	701	28	66.2	+ 7.0	81	7	43	9	31	4.55	+ 2.77	2.95	0	12	11	7	12	se.	U. S. Weather Bureau.
San Augustine	San Augustine	360	4	63.0	.....	81	16†	28	10	44	2.66	.....	1.60	0	4	14	13	3	.....	F. A. Wilson.
San Juanito	Hidalgo	.....	4	71.2	.....	88	22	38	9	40	1.66	.....	1.13	0	6	1	4	25	se.	J. B. McAllen.
San Marcos	Hays	558	20	66.2	+ 5.8	81	16†	44	1†	31	4.91	+ 2.36	2.71	0	3	7	0	23	s.	Miss L. C. Ford.
San Saba	San Saba	1,712	12	62.2	+ 4.9	80	21	33	9	38	8.42	+ 6.16	2.69	0	13	10	15	5	s.	Jas. Burns.
Santa Anna	Coleman	1,744	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. L. Shield.
Santa Gertrudes	Kleberg	.....	13	.....	.....	.....	.....	.....	.....	.....	0.69	− 1.63	0.69	0	1	.....	.....	.....	.....	J. B. Wright, jr.
Sealy	Austin	201	2	.....	.....	.....	.....	.....	.....	.....	3.67	.....	1.26	0	6	6	9	15	se.	O. H. Albert.
Seymour	Baylor	1,320	7	60.0	.....	87	26	35	10	34	3.81	.....	1.80	0	5	16	0	14	s.	T. J. North.
Snyder	Scurry	.....	2	55.4	.....	78	12	37	9†	35	3.79	.....	1.02	0	6	8	13	9	s.	Olin F. Hardy.
Somerville	Burleson	251	4	66.8	.....	83	16†	38	10	38	11.85	.....	8.50	0	5	16	8	6	s.	Ed. Herbst.
Sonora	Sutton	2,200	9	60.3	.....	82	7	30	9	43	7.98	.....	2.75	0	5	11	7	12	s.	C. R. Myers.
Spur	Dickens	2,300	2	53.9	.....	80	12	34	10	40	3.40	.....	0.99	0	10	9	0	21	nw.	J. D. Reagan.
Stamford	Jones	.....	2	57.8	.....	72	12	38	23	22	5.88	.....	1.47	0	5	7[d]	13[d]	6[d]	.....	W. I. Pratt.
Sugarland	Fort Bend	79	12	.....	.....	.....	.....	41	1†	.....	2.03	− 1.39	0.94	0	3	.....	.....	.....	.....	Paul C. Rudat.
Sutherland Springs	Wilson	424	3	.....	.....	.....	.....	.....	.....	.....	3.47	.....	2.30	0	3	.....	.....	.....	.....	W. W. Craft.
Tahoka	Lynn	.....	.....	52.8	.....	80	12	31	10	43	2.07	.....	0.78	0	13	12	5	13	s.	H. C. Crie.
Taylor	Williamson	583	12	64.3	+ 6.6	81	21	41	9	32	5.65	+ 3.01	2.83	0	9	6	14	10	s.	U. S. Weather Bureau.
Teague	Freestone	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.06	.....	0.86	0	7	9	15	6	.....	E. Kuykendall.
Temple	Bell	630	23	62.6	+ 5.8	86	16	40	1	29	6.33	+ 3.55	3.17	0	6	11	7	12	.....	W. Goodrich Jones.
Thurber	Erath	.....	3	.....	.....	.....	.....	.....	.....	.....	7.93	.....	2.29	0	10	.....	.....	.....	.....	T. K. Ball.
Tivoli	Refugio	.....	3	.....	.....	.....	.....	.....	.....	.....	3.92	.....	1.22	0	6	.....	.....	.....	.....	W. H. Gisler.
Troup	Smith	407	.....	64.1	.....	82	22	32	10	34	1.19	.....	1.13	0	2	11	9	10	se.	W. S. Hotchkiss.
Uvalde	Uvalde	937	18	66.4	.....	88	18	41	6	36	5.95	+ 4.43	4.25	0	6	18[b]	2[b]	8[b]	se.	J. G. McBride.

TABLE 1.—*Climatological data for November, 1911. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Continued.																			
Valley Junction	Robertson	289	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Fitzpatrick.
Victoria	Victoria	187	14	67.2	+ 2.4	85	22†	41	9	36	4.30	+ 1.09	1.55	0	4	13	2	15	s. C. C. Zirjacks.
Waco	McLennan	424	24	63.2	+ 5.3	80	21	40	1†	32	5.32	+ 2.65	2.35	0	4	8	2	20	s. A. E. Howell.
Waxahachie	Ellis	556	16	65.2	+ 9.5	82	21	32	10	40	2.70	− 0.22	1.30	0	4	22[b]	0[b]	6[b]	s. W. A. Ownby.
Weatherford	Parker	864	24	59.9	+ 4.6	79	21†	35	10	34	6.64	+ 4.71	2.16	0	12	11	3	16	n. Miss J. Stickfort.
Wills Point	Van Zandt	524	8	61.6	.....	83	21	35	10	39	1.28	.....	0.70	0	2	8	14	8	s. W. W. Gibbard.
Winters	Runnels	.....	2	.....	.....	.....	.....	.....	.....	.....	7.30	.....	2.50	0	7	.....	.....	.....	..... Ed. P. Eason.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 8, Texas and Rio Grande Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	2	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Colorado.																																
Blanca	Rio Grande			.18																												0.18
Cumbres	do			T.	1.16									.88				T.			.59	.06	.05		.08	.07	.07		T.	T.		2.96
Garnett	do			.15																	.33				.05							0.53
La Veta Pass	do			.23																	.29				T.				.18			0.70
Manassa	do				.08															.42						.12						0.62
Platoro	do		.01	.58	.07								.07	.13	.17					.24	.50	.02	.04		.15	.08			T.			2.06
Saguache	do			.20	T.										T.					T.	.10				T.	T.						0.30
San Luis	do			.43	T.																.30				T.	.01						0.74
Wagon Wheel Gap Experiment Sta.	do	T.	.14	.56									.09	.30	.01					.10	.38	T.			.20				.02		.05	1.85
New Mexico.																																
Agricultural College	Rio Grande															T.	.46	.07		.02					.19	.06						0.80
Alamogordo (near)	do																	1.08			.14				.55	.13			T.			1.90
Alamogordo	do																*	.99		.11					.46	.12						1.68
Alamos Ranch	do			.80	.11									.03				.06			.27				.62	.01			.28			2.18
Albuquerque	do			.12										.02				.07			.20				.28							0.69
Ancho	do			.04																		.15	.45		.30	.10						1.04
Anchor Mine	do		*	.44																.16					.14					.19	T.	0.93
Artesia	Pecos			T.	.09													.58							.16	T.	.05	T.		T.		0.88
Aspen Grove Ranch	Rio Grande			.64														.11				.48			.21	.22						1.66
Batemans Ranch	do			.78									T.	.12	T.	T.		.05	T.		.60	T.			.16	.30						2.01
Bluewater	do														T.			T.		T.	.15				T.				T.			0.15
Boaz	Pecos				.06													.66							.39				.04	.22		1.37
Capitan	do				T.													.90			.02											0.92
Carlsbad	do				.30													.54							.23				.14			1.21
Carrizozo	Rio Grande																	*	.44			.30										0.74
Cerrillos (near)	do			.31												.05		.03			.21											0.60
Chama	do			.90	.20								.08	T.	.30	T.		T.		.15	.50	T.	.08		.16	.28						2.65
Cloudcroft	Pecos																	.48			.36				.50				.08			1.42
Corona	do			*	.40																.15				T.							0.55
Coyote	Rio Grande			*	.12												*	.11			.28				.20	.14						0.85
Cundiyo	do		.14	.40																	.16				.40							1.10
Demonstration Farm	Pecos			.39										.37											.25							1.01
Duran	do			.30														.12			.07				.02							0.51
Escondido	Rio Grande																	1.50														1.50
Espanola	do			.03	.48																T.	.20				.37						1.08
Estancia	do			*	.60										T.		.03			T.	.14				.75							1.52
Fluorine	do	T.														T.	.60	.43			.05	T.		.09	.53	.06						1.76
Fort Sumner	Pecos			.17	.18												.03	.66	.01						.42	.08			*	.20	T.	1.75
Gallinas	do			.25														.75		.20					.12							1.32
Gallinas Planting Station.	do		*	.09																	.10				.33							0.52
Glorieta Ranch	Rio Grande															*	.36	.56					*	.17	.55				.03			1.67
Harveys Upper Ranch.	Pecos	T.		.44	.04																.25				.39	.07						1.19
Hermosa	Rio Grande															1.00	.30	.95			T.			T.	1.75							4.00
Hobbs	Pecos	.01			.17										T.	T.	T.	.16					*	.59	.20		.02		T.	.28		1.43
Hondo Reservoir	do																	.81							.18	.02			.02			1.03
Jemez Springs	Rio Grande			1.00	.10								T.								.23	T.			.65	.10						2.08
Knowles (near)	Pecos	.01			.55										T.	T.		.14						.37	.18				T.	.31		1.56
Laguna	Rio Grande			T.																T.					.28	T.						0.28
Lakewood (near)	Pecos															T.		.70							.15							0.85
Lanark	Rio Grande															T.	*	.50	.01		.01				.01	.02						0.55
Las Vegas	Pecos				.05											.07		.10			.06				.35							0.63
Los Lunas (near)	Rio Grande			.24											.05		.08				.29				.33	.05						1.04
Magdalena	do				.32										.05	T.	.20	.05			.30			.06	.38				T.			1.36
Mescalero	do			T.													*	.77			.12			T.	.91	.05			T.	.04		1.89
Mineral Hill	Pecos			.07	.45												T.							*	1.20							1.72
Monterey	Rio Grande			T.											T.	T.	T.	.73			.13				.50	.07			.04			1.47
Moriarty	do			.65											.18			.20						.32	.80							2.15
Mountain Park	do																.02	.52	.47		.27			T.	.10	.34				.04		1.76
Newman	do															.68			.16			.20		.12								1.16
Nogal (near)	Pecos				.05													.53			.23				.21	.04			.12			1.18
Noria	Rio Grande																															
Orogrande	do																.18	.70			.05				.35	.14						1.42
Oscura	do																	.55			.20				.64	.11			.03			1.53
Otis	Pecos	T.			.11													.30							.31	T.	.05	T.	.10	.02		0.89
Pastura	do			.58														.32							.25							1.15
Red River Canyon	Rio Grande			*	.30								T.		T.					.20			T.						T.	.20	.10	0.80
Richland	Pecos				1.08													.26												1.50		2.84
Rincon	Rio Grande																*	.69			T.				.45							1.14
Rio Grande Dam	do																.30	.68			.16			T.	.71	.11			.05			2.01
Rio Grande Industrial School.	do			.36																					.29							0.65
Rosedale	do			T.													.60	.42			.28			.07	.60				T.			1.97
Roswell	Pecos			.01													.06	.72							.13	.02			.01	.02		0.97
San Marcial	Rio Grande																.64	.06			.19				.57							1.46
San Rafael	do		T.	.27											T.					.20		T.			T.	.10		.01	T.			0.58
Santa Fe	do			.58									T.		T.	.12		.08	.01		.54				.36				.06			1.75
Santa Fe Canyon	do			.61												.11		.10			.75				.43	.05			.06			2.11
Santa Rosa	Pecos			.20	.11													.46							.26							1.03
Socorro	Rio Grande																.25						.06	.11	.35			.06				0.83
Stanley	do				.20																				.80							1.00
Taos	do			.40											.15			.04			.29				.15	.10						1.13
Taos Canyon	do			.36	.09										T.	.24	T.				.33	T.			.08	T.			.16			1.26
Tecolote	do			.10	.01											T.	.05	.25			.10				.05					.01		0.57
Three Rivers	do															T.		.56			T.				.40	.10			.05			1.11
Tijeras Canyon	do			.43												.30		.04	.01		.64				.17							1.59
Torrance	Pecos			.51														.10			.02											0.63
Tres Piedras	Rio Grande			.45	.22																.40				.40	.30			.40			2.17
Truchas	do			.90									.09						.04			.34			.08							1.45
Vaughn	Pecos			.60														.35			T.											0.95
Virsylvia	Rio Grande			.20																												
Willard	do	T.		*	.41												.01	T.			.12	T.			*	.52						1.06
Winsors	Pecos			.55											T.			.10			.35				.35							1.35
Texas.																																
Abilene	Brazos	.21	.02	T.	.76	T.										T.					T.		.84	1.10	1.63	.11		.01	.56	.58		5.82
Albany	do	.17			1.23																		2.30		1.43	.32	.52			.80		6.77
Alice	Coast																											.90	.25			1.15

TABLE 2.—*Daily precipitation for November, 1913. District No. 8*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Texas—Continued.																																
Alpine	Pecos																	.30														0.30
Alvin	Coast				.87	T.								T.	T.			T.						T.			T.	.03		1.90		2.80
Anahuac	do					.32																								1.07		1.39
Angleton	do					1.96	T.																	.59				.52	.05	1.46		4.58
Antelope	Trinity	.25		T.	1.37						T.						T.					T.	1.64	.59	.68	T.		T.	.77			5.30
Aspermont	Brazos				1.57																				1.35					1.10		4.02
Austin	Colorado				2.00	.28											T.		.42	T.		.02		.22	1.01			.05		.56		4.56
Ballinger	do	.06	.44		.35	.85																		4.00	1.75	.35			.20	.75		8.75
Barstow	Pecos																							.45					.40			.85
Bay City	Colorado					3.41															.10								3.69			7.20
Beaumont	Neches					.13								T.								T.							.07	3.02	1.95	5.17
Beeville	Coast					.41													.02	.02	T.	.14	.01	T.	.31	.02	T.	1.61	.05	1.38		3.97
Big Spring	Colorado	.09	.06		.34	T.										T.	T.	T.					.07	.57	.23	.07	T.			.46		1.89
Blanco	Guadalupe				.22														.20	.88	.03		.02		1.10	.76	.03	.84		.84		4.92
Boerne	San Antonio			.09								T.				.02	.03	.05	2.06	.12	.05	.63	.03	2.11	1.27	.12	.26	.06	1.10	.03		8.03
Booth	Brazos					.92																	.22						.70	.80	1.70	4.34
Bowie	Trinity	.15				2.07	.11												.21					2.30	.26	.88		.03		.63		6.64
Brazoria	Brazos					3.59	T.									.01	.01	.02				.02		.54				.58	.01	2.15		6.93
Brazos	do		.20		T.	2.00														.34				2.00	.76	.90				1.05		7.25
Brenham	do					.86	.18													.06		.11		.95	3.72			.21	1.35	1.96	.10	9.50
Bridgeport	Trinity		.10			2.10														.08			.05	2.10	.13	1.00					.75	6.31
Brighton	Coast					.25													.60									.23			.21	1.29
Brownsville	Rio Grande		T.	.58																T.					T.					.06		0.64
Brownwood	Colorado	.08	.18		1.10	2.90													T.	.25				1.50	1.35	.42		.70	.35	1.00		9.83
Bryan	Brazos				1.16	T.													T.	T.	.19	.39		1.00				.50	1.35			4.59
Buena Vista	Pecos	.13			.27														.23					.73						T.		1.36
Cameron	Brazos				1.56	.01	T.												.41	.08	.05	.64	.20	.96	T.				.80	.02		4.73
Carmona	Neches					.07										T.						.15	T.			.21		1.80	T.			2.23
Carrizo Springs	Nueces																						T.	.50	.55		T.	.65	T.			1.70
Claytonville	Brazos	T.			.47	.04										T.							T.	1.02	.70	.13	T.	.79		T.		3.15
Cleburne	do		.12		.82														.24	.03				2.37	.48		.16	.03		.81		5.06
Clifton	do	T.			.69	1.79													.19	.04	.04		.21	.96	1.21			1.19	.15	1.12		7.59
Coleman	Colorado		.66	T.	1.84														T.				.22	4.00	2.36	.11	T.	.10		.81		10.10
College Station	Brazos			.07	1.22	.03	.02												.01	T.	.07	.16	.01	.86	.35			.85	.11	.94	.04	4.74
Colorado	Colorado																							1.90				.85				2.75
Columbus	do					1.40	.10													.09		.07		.35	1.40			.48	1.15	.70	1.10	6.84
Comanche	Brazos	.13	.15		2.00	1.31												.35	.15				.05	1.75	1.85	.20		1.35		.90		10.19
Corpus Christi	Coast				.18	.01							T.						.02					T.		T.		2.07	T.	.04		2.32
Corsicana	Trinity					.73															T.	.13	.04	.10	.60					1.10	.22	2.92
Cotulla	Nueces																		.20					1.10	.30			1.50				3.10
Crockett	Trinity					.30																T.		.05				T.	.15	1.90		2.49
Cuero	Guadalupe				.05	.65														.06	.25	.11			1.85			2.25	.24	1.19		6.65
Dallas	Trinity	T.	.09	T.	.73	.19							T.		T.				.01	.02	T.	T.	.78	1.16	.01	.01	.05	T.	.05	.65		3.75
Danevang	Coast					.75																						2.45		1.50		4.70
Del Rio	Rio Grande	.01		T.	.06														1.77		.04	.02	.06	2.21	.25	.09			.02	.01		4.54
Denton	Trinity		.06		.60	.40													.17	1.00	T.	.11	*	3.25	.01	.21		T.		T.		5.81
Devine	Nueces		T.		.25											T.		T.	.60	T.		.43		.50	2.20	T.	T.	.25	.25	.75		5.23
Dialville	Neches																		T.			T.		.10				T.	T.	1.20		1.30
Dilley	Nueces																								2.00							2.00
Dublin	Brazos	.26	.21		T.	2.25													.16	.46				1.65	.86	.57			.68	1.55		8.65
Duval	Colorado				2.93	T.									T.				68	T.	T.	T.		.63	.95			.14		.84		6.17
Eagle Pass	Rio Grande	T.											T.										.06	3.06	.40		.06			T.		3.58
Eastland	Brazos		.60		.60	1.60																T.		1.90	1.20	.77				1.00		7.67
Edna	Lavaca				.53																							2.70		1.90		5.13
El Paso	Rio Grande													T.			12	.68			.08				.09				T.			0.97
Falfurrias	Coast			T.									T.					.10	T.		T.	T.		T.	.15	.10		1.35				1.70
Flatonia	Guadalupe				1.70	.95													.25	.01	T.	.41	.05	.08	.14	.02	.16	.74	.21	.84		5.56
Flint	Neches	.01				.20																		T.				T.	.10	1.12		1.43
Fort Clark	Rio Grande					T.													.50						3.50	.30		.50				4.80
Fort Davis	Pecos																	47										.37	.13			0.97
Fort McIntosh	Rio Grande			.25																				1.02			.01					1.28
Fort Stockton	Pecos	.32			.15							T.							.16					.10	.20	T.			T.			0.93
Fort Worth	Trinity	.01	.10		.77	.24													.10		.01		1.89	1.58	.24	.08	.02	T.	.03	.83		5.90
Fowlerton	Nueces																		.50						5.00			.30				5.80
Fredericksburg	Colorado				.40							T.						T.	.74	.35			.21	2.02	.26	.06		.04	.43	.65		5.16
Gail	do				.85																			.50	.50				1.50			3.35
Gainesville	Trinity				1.39	1.01													.06	.09			3.73	1.19		.33				.74		8.54
Galveston	Coast				.11	.48																T.		T.	T.			.25	.01	1.64		2.49
Garden City	Colorado	.47			.05														.07				.96	.87	.20	.08			.23			2.93
Gatesville	Brazos				1.48	2.25													.35					.15	1.65			.20	.05	1.45		7.58
Georgetown	do					2.65	.02													.07	.15	T.	T.	T.	1.01	.10			1.28	.80		6.08
Goliad	San Antonio				.16	.50												.20				.08		.10	1.05		1.02	2.20	.19	.16		5.66
Gonzales	Guadalupe					95													.10	.30		.10	.08	.20	2.22	.20		.55		.38		5.08
Goree	Brazos	.06		T.	1.14	T.										.02	.01	T.			T.	T.	.69	.25	.67	.02		.02		1.03	.09	4.00
Gorham	do				2.14	T.												T.	T.	T.	T.	T.	T.	1.57	.25			.25	2.00			6.21
Graham	do	T.	.28	.01	1.31	.11									.25	T.							.75	.89	1.15		.05	.07		1.11		5.98
Grand Falls	Pecos				T.													.45						T.	T.				1.05			1.50
Grand Saline	Sabine																					.33								.10	.85		1.28
Grapevine	Trinity			T.		1.03													.15			T.		4.25		.12				.72		6.27
Greenville	Sabine																						.55	1.20					T.	.85	T.	2.60
Halletsville	Lavaca				T.	1.40											T.		.15	T.	T.	T.	T.	.71	.15	1.30	T.	.60	.24	.71		5.26
Hamlin	Brazos				1.52																			.75	.75	1.40				1.00		5.42
Harlingen	Coast		.01	.10		.01													.02			.01			.01		.01		.01			0.18
Harper	Colorado				1.25														1.40					1.96	.74	.06	.60					6.01
Haskell	Brazos				.63	.70																		.85	.33	.59		.17		1.14		4.41
Hebbronville	Coast																								.39	.24		.27				0.90
Hempstead	Brazos					.40																	T.	T.	.68			.20	.65	2.10		4.03
Henderson	Neches																						T.						.25	1.08		1.33
Hewitt	Brazos	T.			.87	1.76													.08	T.		T.	T.	1.04	.58			T.	T.	1.10		5.43
Hico	do				3.33														.60	.23			1.51	.31	1.00		.10	.60	1.30			8.98
Hillsboro	do					1.20	.03																.15	.40	.03			.05	1.10	.07		3.03
Hondo	Nueces					.16							T.		T.				T.	.40				.06	2.10	.86	.06			1.35		4.99
Houston	Coast					.45	.21															T.		T.					.25	.11	1.29		2.31
Huntsville	Trinity						.51														T.								T.	T.	1.93		2.44
Jayton	Brazos					.90																		.35	.30	.30				.85			2.70
Jewett	Trinity						.85														T.	T.	.50		T.			T.	.10	1.30			2.75
Junction	Colorado	.25			1.00														1.00					2.25	2.00				.25	1.00			7.75
Kaufman	Trinity				T.	.52															.06	T.		.34					T.	.79			1.71
Kerrville	Guadalupe																		1.00	.85			.25		2.12	1.08	.05	.12		.80			6.27
Knickerbocker	Colorado	.25		.10	.40								T.						.31					2.35	.50	.05				.60			4.56
Kopperl	Brazos					3.10														T.				.40	.70	.50			.40	1.60	T.		6.70

TABLE 2.—*Daily precipitation for November, 1913. District No. 8*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Texas—Continued.																																
Lagrange	Colorado				*	1.08	.09												.53	.05	.03	.41	.09	.26	.03	.02	T.	.66	.88	.30		4.43
Lamesa	do				.55																		.35		.24				1.90			3.04
Lampasas ‖	Brazos				1.23	1.30													.83	.26				1.68	.18				.25	.98		6.71
La Parra	Coast		.50																									.60	.15			1.25
Laredo ‖	Rio Grande																		.01				.01	.21	.81			.06				1.10
Laureles Ranch	Coast																											.52				0.52
Liberty ‖	Trinity					.28																			.25				.30	1.90	1.55	4.28
Llano	Colorado					2.50	.03												.45	.30				T.	1.20	.23	.03		.62	.67		6.03
Llano Grande ‖	Rio Grande		T.															T.	.15		T.			T.	T.	T.	.74					0.89
Long Lake ‖	Trinity					.45																	T.							1.00	.60	2.05
Longview ‖	Sabine																												.37	.04	.78	1.19
Lubbock	Brazos		T.	.06	.58	T.	T.									.02	.01	.02						.05	.22	T.		T.	.20	.38		1.54
Lufkin	Neches																			.01										1.85		1.86
Luling ‖	Guadalupe					.58													.18	.16	.04	.36	.04	.10	2.55	.25	.06	.05	.75	.82		5.94
McGregor	Brazos				1.10	1.85																			1.80			1.05				5.80
McKinney	Trinity	T.	.02		.04	1.56													.02	T.	T.	T.	.26	1.82	T.	.03	T.	.13		.89		4.77
Marathon	Rio Grande				T.														.32					.10								0.42
Marble Falls ‖	Colorado					1.80													.60	.40					1.00	.30	T.	T.	.30	.10		4.50
Marfa	Rio Grande																		.15													0.15
Marshall	Sabine							T.																					.24	.88		1.12
Matagorda	Coast				1.21																			.11				.20	.40	2.20		4.12
Mexia ‖	Brazos	T.				1.02														T.	T.		.13		.43		.14		.17	1.10		2.99
Midland	Colorado	.43	.10	.14														T.	T.			.46	1.25	.28				1.83				4.49
Mont Belvieu	Coast					.40											.11											.11	.09	1.48		2.19
Montell	Nueces					.22													1.34	.01		.04	.24	2.06	.65	.06	.01	.52	T.	2.16	.01	7.32
Mount Blanco	Brazos					1.30																			.86					2.00		4.16
Nacogdoches ‖	Neches						T.																T.						1.42	.11	1.22	2.75
New Braunfels	Guadalupe				.20														.42					.14	3.08	.07	.07	1.90		.72		6.60
Palestine	Trinity				.29	.09													T.	T.	T.	.03		.01				.11	.08	.62		1.23
Panter	Brazos	.18			1.72	T.										T.			.50	T.		T.	2.00	.72	1.12	.48	.03		.80	.08		7.63
Pearsall	Nueces																		.32					3.71	.55	.08				.30		4.96
Pierce ‖	Colorado					2.08																.15		.27				2.03	.64	2.06	7.23
Post	Brazos	T.	T.	.54	.22									T.	T.	T.	.04	.19						T.	.48	.32			.80			2.59
Putnam	do	.40		1.85																			2.50	1.50			.25			.75		7.25
Raymondville ‖	Coast			.12		.20													.06	T.				.06	.24	T.			1.33			2.01
Ricardo	do																							T.		.53	T.	.80	T.			1.33
Rio Grande ‖	Rio Grande					.50																			.90				.20			1.60
Riverside ‖	Trinity					.15																									1.85	2.00
Rockland ‖	Neches																												.23	.75	1.80	2.78
Rockport	Coast				.16																			.15				1.40		.05		1.76
Roseville	Nueces				.06	.05						.05					.13	.34	.03		.85		.13	3.25	.05	T.	.11	.03	T.	.42		5.50
Runge	San Antonio				1.51																			1.33						1.12		3.96
Sabinal	Nueces																		.31					.48	2.43	.03	.06	.17		.81		4.29
Salado	Brazos				2.45														.70					.95	.05			1.30				5.45
San Angelo	Colorado	.46	1.18	.54																.10			.15	3.15	.59					.85		7.02
San Antonio	San Antonio				.10													.07	.45		T.	T.	T.	.38	2.63	.02	.01		T	.89		4.55
San Augustine	Neches																	T.			.02							.38	.66	1.60		2.66
San Juanito	Coast			.12		1.13						T.						T.	.08						.18	T.	.03	.12				1.66
San Marcos ‖	Guadalupe					.40																			2.71					1.80		4.91
San Saba	Colorado	.08			2.69	.41	.02												.80	.25			.08	.53	.94	.20		1.47	.23	.72		8.42
Santa Gertrudes ‖	Coast																												.69			0.69
Sealy	Brazos				T.	.92													T.		T.	.08		.16				1.26	.07	1.18		3.67
Seymour	do				1.80	.10											.05								1.10	.76						3.81
Snyder ‖	Colorado				.72	.58											T.							.58	.47	.42			1.02			3.79
Somerville	Brazos				.85													T.			T.			8.50	.50			.65		1.35		11.85
Sonora	Rio Grande				2.75														.80					2.30	.20					1.93		7.98
Spur ‖	Brazos		T.		.99	.66											.08	.01	T.					.39	.12	.29		.02		.82	.02	3.40
Stamford	do			.07	1.47																			1.66	1.25					1.43		5.88
Sugarland ‖	do				.93																							.94	.16			2.03
Sutherland Springs	San Antonio																								2.30		.57		.60			3.47
Tahoka	Brazos			T.	.60	.02	T.									.06	.08	.05	.02	T.	T.		.05	.11	.05	.10	T.	.12	.78	.03	T.	2.07
Taylor	do				2.83	T.	T.											T.	.53	.01	T.	.18		.74	.11			.39	.02	.84		5.65
Teague	do				.74																.11	.16		.86				.40	.55	.24		3.06
Temple ‖	do					3.17														.53		.05			.90				.27	1.41		6.33
Thurber	do	.25	.24		2.10		.30												.06				.54	2.29	1.16	.09				.90		7.93
Tivoli	Guadalupe				1.02														.15		.10			.28				1.15		1.22		3.92
Troup	Neches	T.				.06																							T.	1.13		1.19
Uvalde	Nueces																		.50				.15		4.25	.45			.10	.50		5.95
Victoria ‖	Guadalupe				.80																			.95		1.00		1.55			4.30
Waco ‖	Brazos					1.80	T.												T.	T.	T.	T.		T.	2.35	T.			.15	1.02	T.	5.32
Waxahachie ‖	Trinity					1.30																			.30					.80		2.70
Weatherford ‖	do	.01	.08	T.		2.16													.03	.40		.04		1.54	.56	.77		.04	.12	.89		6.64
Wills Point	Sabine																	T.	T.		T.	.58		T.				T.	T.	.70		1.28
Winters	Colorado	.50	.50	1.30																			.10	2.50	1.90					.50		7.30

*Precipitation included in that of the next measurement.
‡Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 8, Texas and Rio Grande Valley.*

Date.	Colorado.				New Mexico.														Texas.							
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountainair		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Spring.		Brownsville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	60	20	54	19	67	38	50	43	.....	.....	.....	.....	55	32	48	42	56	32	.....	.....	49	45	47	41	76	57	68	54
2	54	19	53	21	72	32	61	44	.....	.....	.....	.....	60	30	56	44	54	35	.....	.....	60	45	55	42	77	58	69	54
3	45	28	47	29	72	37	70	47	.....	.....	.....	.....	55	38	54	38	51	32	.....	.....	65	57	68	44	82	66	71	60
4	44	19	43	27	65	39	59	37	.....	.....	.....	.....	54	23	50	35	44	29	.....	.....	60	45	64	44	85	63	74	66
5	40	16	42	21	69	28	64	27	.....	.....	.....	.....	60	24	62	26	51	28	.....	.....	55	45	55	41	75	62	69	59
6	49	24	49	13	78	29	81	32	.....	.....	.....	.....	68	30	78	30	57	33	.....	.....	67	46	73	44	80	53	69	55
7	61	21	57	28	79	39	82	40	.....	.....	.....	.....	69	35	74	37	60	36	.....	.....	69	50	69	41	82	57	80	56
8	58	18	54	20	65	44	73	44	.....	.....	.....	.....	68	32	60	36	55	28	.....	.....	56	43	59	37	74	60	68	56
9	60	14	59	19	69	31	82	46	.....	.....	.....	.....	70	28	69	30	58	32	.....	.....	69	37	71	31	71	45	68	49
10	60	15	61	20	69	32	75	30	.....	.....	.....	.....	62	32	73	32	63	37	.....	.....	69	41	71	35	77	44	67	46
11	59	12	58	18	73	34	81	39	.....	.....	.....	.....	65	40	74	35	58	35	.....	.....	75	49	77	41	81	56	75	61
12	59	21	51	28	74	43	83	47	.....	.....	.....	.....	65	35	77	50	56	36	.....	.....	76	57	81	54	81	65	74	66
13	56	22	52	30	68	37	78	39	.....	.....	.....	.....	56	42	66	41	54	39	.....	.....	75	60	77	54	82	60	74	66
14	57	26	50	27	69	48	79	47	.....	.....	.....	.....	62	34	73	49	56	38	.....	.....	71	63	77	61	81	64	74	68
15	50	19	48	27	75	39	80	52	.....	.....	.....	.....	60	36	76	47	54	39	.....	.....	74	61	77	60	83	58	73	69
16	52	13	54	15	62	50	75	49	.....	.....	.....	.....	56	35	68	48	60	35	.....	.....	69	54	71	52	84	65	79	69
17	56	19	50	38	57	46	66	50	.....	.....	.....	.....	50	38	59	46	56	43	.....	.....	76	58	74	51	80	69	75	70
18	56	21	56	28	65	39	73	35	.....	.....	.....	.....	56	34	67	38	58	38	.....	.....	73	58	70	46	81	72	77	70
19	47	28	50	38	68	34	78	42	.....	.....	.....	.....	58	35	71	40	58	37	.....	.....	78	58	76	54	83	65	76	71
20	45	29	46	30	55	39	71	51	.....	.....	.....	.....	50	30	58	42	50	31	.....	.....	76	59	73	61	83	67	77	71
21	47	21	38	27	62	29	74	33	.....	.....	.....	.....	48	25	61	32	43	26	.....	.....	77	55	73	54	84	74	78	74
22	46	19	38	21	64	37	73	35	.....	.....	.....	.....	50	28	64	38	43	33	.....	.....	74	53	74	53	84	73	78	73
23	48	13	45	14	60	43	64	45	.....	.....	.....	.....	46	32	52	38	51	27	.....	.....	53	43	55	41	84	69	77	73
24	45	13	39	19	57	45	55	31	.....	.....	.....	.....	47	30	44	38	42	33	.....	.....	48	40	46	38	82	69	76	71
25	39	30	40	30	59	43	55	40	.....	.....	.....	.....	48	28	48	41	45	31	.....	.....	60	44	58	41	82	60	74	70
26	43	19	43	21	65	36	54	46	.....	.....	.....	.....	50	28	62	41	47	26	.....	.....	68	57	62	51	84	60	76	71
27	44	14	45	16	67	34	67	46	.....	.....	.....	.....	53	28	66	45	49	30	.....	.....	72	58	66	53	85	67	73	62
28	41	15	46	22	63	35	66	40	.....	.....	.....	.....	50	28	62	34	45	31	.....	.....	68	49	68	49	80	68	76	70
29	45	14	43	17	60	31	61	44	.....	.....	.....	.....	48	22	56	41	44	27	.....	.....	59	46	63	44	84	70	76	65
30	39	11	42	17	62	25	65	39	.....	.....	.....	.....	45	23	58	31	44	28	.....	.....	60	44	61	39	81	64	74	58
Mns..	50.2	19.1	48.4	23.1	66.3	37.2	69.8	41.3	.....	.....	.....	.....	56.1	31.2	62.9	38.8	52.1	32.8	.....	.....	66.7	50.7	67.0	46.6	80.9	62.5	73.8	64.1

Date.	Texas.																									
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	58	53	64	41	86	30	51	41	54	48	58	52	63	48	60	46	60	42	58	46	.....	.....	66	49	54	44	60	48
2	58	51	74	43	76	49	68	45	61	45	64	50	70	50	71	45	71	39	67	43	.....	.....	71	51	64	45	70	43
3	73	57	74	48	80	55	79	48	66	54	66	55	76	53	75	50	71	42	73	46	.....	.....	74	57	68	53	71	52
4	66	53	62	46	82	55	72	41	62	59	67	63	85	63	76	61	73	55	71	56	.....	.....	75	58	62	50	68	60
5	66	44	68	35	76	55	62	33	67	54	68	64	65	58	72	61	76	59	72	59	.....	.....	64	52	58	46	60	54
6	72	42	77	44	80	38	77	37	67	52	70	63	74	61	75	58	78	48	73	54	.....	.....	74	47	70	45	69	57
7	80	52	77	49	86	46	80	54	72	56	69	60	78	53	79	58	76	59	78	62	.....	.....	81	54	70	47	78	53
8	67	43	63	46	90	55	67	38	57	46	68	52	64	56	66	50	71	52	63	46	.....	.....	65	47	70	47	64	45
9	72	35	69	38	78	30	76	34	60	41	65	47	69	41	68	43	64	57	62	41	.....	.....	74	43	61	50	70	41
10	77	37	68	42	84	32	80	42	64	38	61	53	68	43	69	46	67	32	66	41	.....	.....	73	44	67	35	68	42
11	75	51	71	47	82	33	81	49	74	46	70	61	75	53	76	51	76	35	74	45	.....	.....	75	47	70	43	75	43
12	79	58	74	52	85	54	87	51	78	61	73	65	79	60	77	62	79	51	76	61	.....	.....	79	62	79	56	78	59
13	80	61	69	44	86	55	84	50	77	63	73	66	79	58	79	63	81	59	78	61	.....	.....	79	60	80	57	78	61
14	78	64	71	57	89	57	83	55	71	64	73	67	79	61	81	62	79	60	77	61	.....	.....	78	63	73	64	78	62
15	80	62	76	49	87	64	85	59	75	63	71	67	81	61	79	65	78	63	76	60	.....	.....	78	62	68	57	78	62
16	80	61	66	53	87	65	83	53	75	60	76	67	80	60	82	66	78	57	78	62	.....	.....	81	64	62	50	80	62
17	78	64	59	47	84	66	74	55	78	59	75	66	81	62	81	65	80	61	77	61	.....	.....	77	65	77	54	79	61
18	74	57	63	44	84	70	75	44	75	64	72	67	75	68	78	67	80	57	77	62	.....	.....	72	67	76	62	70	63
19	75	64	69	40	84	67	86	42	77	67	74	68	79	67	81	66	81	57	77	66	.....	.....	76	67	80	55	76	66
20	74	65	56	40	88	67	77	55	76	67	74	69	80	69	77	68	80	60	77	67	.....	.....	78	67	78	60	78	67
21	76	66	63	36	87	69	77	42	82	69	73	69	80	72	79	69	82	61	80	67	.....	.....	80	69	76	57	81	68
22	78	66	66	41	82	71	74	50	80	57	73	68	80	70	80	68	79	58	81	69	.....	.....	78	71	70	60	79	70
23	71	54	58	48	81	70	66	43	57	52	72	67	78	67	79	69	78	60	71	62	.....	.....	77	59	60	43	70	57
24	56	50	52	45	78	57	45	40	56	50	69	65	76	58	76	62	80	59	66	56	.....	.....	70	57	57	47	64	57
25	62	54	59	48	81	57	63	43	69	52	69	64	77	63	75	55	78	48	74	53	.....	.....	70	61	57	45	72	56
26	68	59	66	41	80	69	61	51	70	58	71	66	74	62	76	61	79	48	75	55	.....	.....	74	65	87	55	70	60
27	73	63	66	38	77	65	68	49	71	60	71	64	75	67	71	63	78	62	71	61	.....	.....	76	65	70	57	67	60
28	70	62	61	40	80	65	78	52	69	59	73	68	76	63	78	62	78	61	74	61	.....	.....	73	64	64	57	73	59
29	71	52	58	35	80	67	75	42	69	53	72	62	74	60	71	60	71	58	66	56	.....	.....	74	53	64	51	70	57
30	69	44	64	32	85	65	70	35	64	51	75	61	70	52	73	55	68	54	64	50	.....	.....	76	49	64	51	70	49
Mns..	71.9	54.8	66.1	43.6	82.8	56.6	73.5	45.8	69.1	55.6	70.2	62.5	75.3	59.3	75.3	59.2	75.7	54.0	72.4	56.3	.....	.....	74.6	57.9	68.6	51.4	72.1	56.5

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

GENERAL SUMMARY.

A feature of the month was the general absence of conditions favorable to the upbuilding of high pressure areas in the Great Basin, and of clear, cold, and settled weather, the usual accompaniment of such areas in the central part of the Colorado Basin and adjacent region. Instead, weather conditions were dominated by low pressure areas, attended by much cloudiness, nights warmer than usual, mean temperatures above the seasonal average, and well-distributed precipitation. Much of the precipitation was in the form of rain at moderate altitudes in the central part of the district, where, in November, it usually occurs in the form of snow. In many localities in the southern part of the district the rainfall was double or treble the usual amount. In Arizona and New Mexico where there had been a long period of deficient precipitation the rains were of inestimable value in placing the soil in excellent condition for fall work and in assuring a sufficient supply of water for range stock, besides improving the outlook for the ranges. There has been some increase in the amount of water stored in the Roosevelt Reservoir, but not nearly sufficient to insure an adequate supply for next season. At Bisbee, Ariz., damage resulted from the heavy rainfall of the 16th and 17th. In all districts the sunshine was deficient and the relative humidity much higher than the normal.

TEMPERATURE.

The monthly mean temperature was 46.3°, or 2.9° above the normal. The mean for November, 1912, was 42.6°. The highest monthly mean was 65.4° at Mohawk, Ariz., and the lowest, 27°, at Fraser, Colo. Temperatures were higher than the normal, except on the 22d and 23d, and a day or two here and there. The highest temperatures generally occurred during the first decade. Readings of 80° or higher were noted at 2 stations in western New Mexico, and at the majority of stations in Arizona and southeastern Nevada. The lowest temperatures occurred principally in the last decade. Zero temperatures or lower occurred at a number of stations in the Wyoming, Utah, and Colorado areas, while freezing occurred at all stations in western New Mexico and southeastern Nevada, and at a majority of those in Arizona. The highest temperature, 98°, occurred at Parker, Ariz., on the 6th, and the lowest, −17°, at Scofield, Utah, on the 22d.

Details of temperature are summarized in the following table:

Areas of States in District No. 9.	Temperature.					
	Mean.	Departure from normal.	Highest.	Station.	Lowest.	Station.
Western Wyoming	30.5	+1.4	61	Green River	− 4	Willow Creek Cabin.
Western Colorado	36.6	+4.0	70	At 2 stations	−12	Dillon.
Eastern Utah	40.1	+1.2	77	Leeds (near)	−17	Scofield.
Western New Mexico	45.9	+3.3	82	Gage	10	Aragon.
Arizona	53.6	+1.9	98	Parker	12	Flagstaff No. 1.
Southeastern Nevada	50.8	+5.3	89	Logan	20	Caliente.

PRECIPITATION.

The average for the stations reporting was 1.92 inches, or 1.02 inches above the normal. The average for November, 1912, was 0.28 inch. Precipitation occurred somewhere in the district every day but the 9th. It was general during the first four days and from the 10th to 25th. An inch or more in 24 hours occurred 6 times in eastern Utah, 13 in western New Mexico, and 37 times in Arizona. The greatest monthly amount, 5.88 inches, occurred at Ranch, Utah, and nearly as much occurred at Thomas, Ariz. The least precipitation, a trace, occurred at Cochetopa, Colo. Monthly snowfalls of 10 inches or more occurred at 1 station in western Wyoming, 14 stations in western Colorado, and 2 in eastern Utah. The greatest monthly fall, 29.5 inches, occurred at Cascade, Colo. The average number of days with 0.01 inch or more precipitation was 5 in western Wyoming, 8 in western Colorado, 6 each in eastern Utah and western New Mexico, 7 in Arizona, and 4 in southeastern Nevada. For the district as a whole the average was 7 days.

The average precipitation and departures from the normal on the different watersheds are given in the following table:

Watershed.

Green.		Grand.		San Juan.		Little Colorado.		Gila.		Mimbres.		Colorado proper.	
Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.
1.07	+0.40	1.28	+0.45	2.17	+1.32	1.52	+0.50	2.40	+1.34	2.41	+1.55	1.91	+0.96

MISCELLANEOUS.

The average amount of sunshine in percentages, with departures from the normal, was as follows: Grand Junction, 49, −20; Durango, 52, −27; Phoenix, 64, −19; and Yuma, 88, 0.

The relative humidity reported was: Grand Junction, 70, +14; Durango, 75, +7; Phoenix, 62, +17; and Yuma, 58, +14 per cent.

SNOWFALL IN THE MOUNTAINS.

Western Wyoming.—The snowfall at high elevations has been above the normal, but the water content is small.

Western Colorado.—Up to the end of November weather conditions were not favorable to the accumulation of much snow in the mountains. October was colder and generally much drier than common. November was unusually mild, and the precipitation—much in the form of rain—was greater than the normal in the lower drainage areas of the Grand and Gunnison. A moderate excess of precipitation also occurred in the regions drained by the Yampa, White, and San Juan, but over the upper watersheds of the Grand and Gunnison the snowfall was less than the normal. The ground for the most part is unfrozen or frozen only to a short distance below the surface.

At the close of November the average depth of snow on the Grand watershed was 6 inches, average altitude 8,900 feet; Gunnison, 7 inches for 8,900 feet; Yampa, 5 inches for 7,800 feet; and San Juan, 3 inches for 8,000 feet.

Arizona.—In the Apache Indian Reservation the amount of snow at the end of November below 8,000 feet was a trace; the depth at 9,000 feet, was 12 inches; and at 10,000 feet, 20 to 36 inches. In other parts of the State there was no snow of consequence at moderate altitudes at the end of the month.

TABLE 1.—*Climatological data for November, 1913. District No. 9, Colorado Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Big Piney	Lincoln	6,800																		Ira Dodge.
Daniel	do	6,740	14																	John Angus.
Eden	Sweetwater	6,577	4	28.8		55	10	1	29	45	0.23		0.15	1.5	3	9	8	13	n.	Eden Val. L. & I. Co.
Green River	do	6,083	8	33.4	41.4	61	7	7	22	41	0.05	− 0.34	0.03	T.	2	14	10	6	w.	Wm. Hutton.
Pinedale	Fremont	7,167	7																	U. S. Forest Service.
Wamsutter	Sweetwater	6,702		32.4		58	10	1	22†	34	0.26		0.08	1.7	7	14	4	12	sw.	T. C. Sherman.
Willow Creek Cabin	Fremont	7,500	4	27.3		49[f]	11	− 4[f]	22	37[f]	1.30		0.34	21.0	8	9[g]	5[g]	9[g]	nw.	U. S. Forest Service.
Colorado.																				
Ashcroft	Pitkin	9,483	11	30.4	+ 2.3	59	10	− 4	22	46	0.86	− 0.19	0.20	14.5	11					Dan McArthur.
Aspen	do	7,909																		U. S. Forest Service.
Blue Valley Ranch	Grand	7,525		30.0		55	1	− 2	23	41	1.01		0.67	2.0	3	14	7	9	sw.	L. R. Hubbard.
Cascade	San Juan	8,900	6								3.25		0.80	29.5	13	11	5	14		The Western Colo. Power Co.
Cedaredge	Delta	6,175	15	40.9	+ 2.6	66	11	15	23	34	2.08	+ 1.52	0.65	2.0	8	10	9	11		Harry A. Cobbett.
Cochetopa	Saguache	9,088	4								T.		T.	0.3	0	7	13	10	w.	Miss Bessie McDonough.
Collbran	Mesa	6,000	20	38.8	+ 2.5	62	10	9	29	33	1.60	+ 0.60	0.89	4.0	8	10	6	14	sw.	A. A. Wood.
Columbine	Routt	8,766	3								0.77		0.22	18.0	7	7	11	12	sw.	Mrs. M. A. Caron.
Columbine Ranch	Delta	6,925	3								2.36		0.80	6.5	8	11	3	16	s.	George W. Wade.
Cortez	Montezuma	6,100	2	42.6		65	10†	26	11†	39	2.00		0.50	T.	4	19[b]	8[b]	1[b]		W. G. Clucas.
Crawford (near)	Montrose	6,600	3	37.0		60	11	12	29	32	1.16		0.30	2.0	6	18	4	8		C. W. Roe.
Crested Butte	Gunnison	8,867	3	31.0		61	10	− 5	23	43	1.16		0.20	11.5	8	9	11	10		Charles L. Ross.
Delta	Delta	4,965	23	41.9	+ 4.7	70	6†	18	23	46	0.97	+ 0.45	0.42	0.4	12	13	10	7		E. M. Getts.
Dillon	Summit	8,800	3	28.2		58	10	− 12	23	55	0.58		0.41	4.5	4	16	4	10	nw.	Mrs. Nannie B. Strong.
Durango	La Plata	6,534	18	40.0	+ 2.8	65	7	20	29	37	3.36	+ 2.22	1.11	1.0	13	11	6	13	ne.	U. S. Weather Bureau.
Eureka	San Juan	10,000	6								1.22		0.64	13.0	5	9	8	13	s.	The Western Colo. Power Co.
Fraser	Grand	8,560	4	27.0		54	10	− 10	23	50	0.52		0.25	5.4	5	6	7	17	w.	L. D. C. Gaskill.
Fruita	Mesa	4,590	14	42.2	+ 4.8	67	1†	21	10†	43	1.48	+ 0.84	0.56	0	9	9	9	12		J. B. Willsea.
Glade Park	do	7,000	2								1.49		0.60	8.0	9	9	12	9	sw.	A. F. Terrill.
Gladstone	San Juan	10,400	6								2.76		0.75	28.7	10	10	6	14	ne.	The Western Colo. Power Co.
Glenwood Springs(near)	Garfield	5,823	15	39.3	+ 5.0	63	4	10	23	43	0.92	0	0.40	0	5	14	0	16	w.	E. A. O'Neil.
Grand Junction	Mesa	4,602	22	43.6	+ 3.7	67	1	24	22	36	1.15	+ 0.60	0.42	1.0	9	9	6	15	se.	U. S. Weather Bureau.
Grandlake	Grand	8,153	5								0.92		0.52	10.5	4	11	11	8	w.	Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	21	41.7	+ 4.2	69	9	17	29	47	2.35	+ 1.45	0.87	1.0	13	8	6	16		David Evans.
Gunnison	Gunnison	7,670	20	35.4	+ 8.1	67	3	− 1	23	52	0.11	− 0.49	0.05	0.2	4	18	11	1	sw.	Clarence Adams.
Hayden	Routt	6,337		36.2		65	10	− 2	29	41	1.63		0.40	6.0	7	6	10	14	sw.	A. W. Friedrich.
Hesperus (near)	La Plata	7,610	1								3.14		0.98		9	9	7	14		G. F. Snyder.
Horsefly	Montrose	8,700	3								3.36		0.75	22.6	9	15	12	3	w.	Lawrence J. Finch.
Ironton	Ouray	10,000	3								1.10		0.40	10.0	3	13	8	9	sw.	Mrs. Amanda E. Foley.
Lake City	Hinsdale	8,686	8	33.2		58	10	5	23	43	0.32		0.18	4.6	3	14	6	10	n.	J. F. Maurer.
Lay	Moffat	6,190	19	34.0	+ 3.2	66	20	− 11	22†	46	1.53	+ 0.72	0.56	6.5	4	9	1	20	sw.	A. G. Wallihan.
Mancos	Montezuma	6,960	14																	Miss Gertrude Rickner.
Marble	Gunnison	7,951	4	34.8		62	10	− 4	23	43	2.21		0.44	7.0	11	18	4	8	ne.	F. E. Morse.
Marshall Pass	Saguache	10,846	10								0.62	− 0.57	0.27	7.0	3	10	8	12		Wm. L. Williams.
Meeker (near)	Rio Blanco	6,182	21	36.7	+ 3.8	66	1	− 6	23	44	1.80	+ 0.78	0.73	6.0	8	11	3	16		T. Baker.
Montrose	Montrose	5,811	24	40.8	+ 4.7	66	11	15	23	43	0.76	+ 0.23	0.30	2.1	7	15	5	10		U. S. Reclamation Service.
Nast	Pitkin	7,953	3	31.2		59	10	0	23	47	0.55		0.13	9.0	6	12	13	5	w.	Arthur Hanthorn.
Pagosa Springs	Archuleta	7,108	6	37.4		64	9	17	10†	46	2.57		0.70	2.2	13	12	5	13	sw.	E. T. Walker.
Palisades	Mesa	4,729	2	43.6		70	1	23	22	40	1.77		0.79	T.	8	11	8	11		E. P. Updegraff.
Paonia	Delta	5,694	18	42.3	+ 2.5	67	10	17	23	35	1.93	+ 1.12	0.47	1.0	9	10	12	8	sw.	J. M. Underwood.
Pitkin	Gunnison	9,500	4								0.42		0.14	2.0	4	19	5	6	s.	Mrs. Maggie Cammann.
Redcliff	Eagle	8,695	20													9[f]	6[f]	9[f]		Dorothea Greiner.
Redvale	Montrose	6,300		36.4		57	7†	12	29	30	1.79		0.46	4.0	6	13	6	11		Dr. E. S. C. Foster.
Rico	Dolores	8,824	11								2.03	+ 0.53	0.63	8.7	9	9	11	10	s.	Clinton B. Smith.
Rifle	Garfield	5,437	2	40.0		64	11	15	23	40	1.34		0.83	2.0	10	12	5	13	sw.	Herman Eiche.
River Portal	Montrose	6,570	7			63	10				1.44		0.25	14.0	11	11	13	6		U. S. Reclamation Service.
Sapinero (near)	Gunnison	8,125	10	33.2	+ 3.7	56	10	5	23	37	0.91	− 0.05	0.18	4.2	11	11	9	10	w.	W. F. Irving.
Shoshone	Garfield	6,110	3	40.8		64	10	17	23	37	2.08		0.94	3.0	10	12	7	11		Central Colorado Power Co.
Silverton (near)	San Juan	9,400	6	28.8		59	9	− 6	23	48	2.06		0.64	20.6	8	10	7	13	sw.	The Western Colo. Power Co.
Spruce Lodge	Grand	9,600	5								1.67		0.89	22.0	9	9	7	14	n.	H. J. Wills.
Steamboat Springs	Routt	6,683	10	34.8	+ 4.6	63	10	− 9	22	53	2.24	+ 0.83	0.90	7.0	7	10	13	7		Herbert B. Gee.
Tacoma	La Plata	7,300	6								2.87		0.71	3.0	14	8	9	13		The Western Colo. Power Co.
Telluride	San Miguel	8,756	1	34.8		64	9	− 2	29	46	1.03		0.39	11.0	7	16	2	12	w.	George R. Painter.
Terminal Dam	La Plata	8,300	6								3.09		0.86	22.7	11	10	9	11	sw.	The Western Colo. Power Co.
Yampa (near)	Routt	8,000	4								1.03		0.38	9.3	6	11	11	8	n.	Wm. A. Charls.
Utah.																				
Bluff	San Juan	4,200	1																	H. H. Redd.
Canaan	Washington		1																	L. M. Lauritzen.
Castle Dale	Emery	5,500	14	36.2	− 1.4	68	1	6	29	50	1.43	+ 0.68	1.10		4	16	9	5		Miss Fay Jeffs.
Cisco	Grand	4,447	13								1.01	+ 0.66	0.60		3	10	5	15	sw.	Jas. I. Rounds.
Dragon	Uinta	6,000	3	36.9		60	1	8	22	29	1.36		0.50	1.0	9	8	5	17	n.	Homer D. Ford.
Duchesne	Wasatch	5,500	6	36.2		62	6	11	23	34	1.57		0.65	5.4	4	10	8	12		Matthew M. Smith.
Elkhorn	Uinta	6,657	3																	Chas. de Moisey, jr.
Emery	Emery	6,200	12	39.7	+ 1.8	65	1†	11	29	35	0.20	− 0.18	0.20	0	1	3	4	23	n-sw.	H. C. Wickman.
Escalante	Garfield	5,700	10																	Geo. H. Barney.
Ft. Duchesne	Uinta	4,941	25	33.4	− 0.3	70	12	10	25	45	0.40	+ 0.04	0.15	1.5	4	27	1	2	w.	Geo. W. Dickson.
Fruitland	Wasatch	7,625	3																	J. E. L. Carey.
Grayson	San Juan	6,000	6	41.2		67	8	21	13	32	2.84		0.71	0	12	11	5	14	sw.	E. F. Thompson.
Green River	Emery	4,080	13	41.3	+ 1.4	68	1†	8	23	42	0.63	+ 0.12	0.23	3.0	6	10	15	5	sw.	Edgar E. Adams.
Hanksville	Wayne	4,200	2																	F. J. Weber.
Hite	Garfield	3,500	13	50.2	+ 2.5	76	1	29	23[f]	33	0.66	− 1.3	0.30	T.	5	10	15	5		John P. Hite.
Hurricane	Washington	3,800	1								3.10		0.70		8	8	12	10		Amos Workman.
Kanab	Kane	4,925	5	43.9		71	7	22	29	40	2.40		0.82	0	6					D. D. Rust.
La Sal	San Juan	7,000	9	38.6[e]		64	10	14	30	35	1.38		0.71		5	4[d]	7[d]	15[d]		G. W. Carpenter.
Leeds (near)	Washington	3,400	1	49.2		77	9	30	22†	25	3.93		1.60	0	7	7	5	18		B. F. Anderson.
Manila	Uinta	6,225	3	32.6		62	9	− 10	22	41	1.02		0.23	6.0	8	11	14	5		Daniel M. Nelson.
Moab	Grand	4,000	23	45.0	+ 3.8	70	11	19	23	37	1.19	+ 0.52	0.76	T.	8	9	6	15		Henry Crouse.
Monticello	San Juan	7,545	5																	Geo. F. Barton.
Mountain Home	Wasatch	6,750	1								1.10		0.30	11.0	7				sw.	Oscar Wilkins.
New Harmony	Washington	5,200	2								3.20		1.20		5					Geo. F. Prince.
Orderville	Kane	6,660	3								2.96		0.50		12					F. A. Porter.
Pine Valley	Washington	6,000	2								2.93		0.83	5.0	12	8	10	12	s.	Mason Gardner.
Price	Carbon	5,557	2	41.2[b]		72	1	19[a]	23	44	1.84				5	5[b]	5[b]	12[b]	nw.	George Mathis.

TABLE 1.—*Climatological data for November, 1913. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Utah—Continued.																				
Ranch	Kane	6,700	11	37.6	+ 1.5	64	8	15	22†	37	5.88	+ 4.17	1.42	.....	7	14	7	9	s.	J. W. Seaman.
San Rafael	Emery	4,250	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. George	Washington	2,880	26	48.8	+ 1.4	76	1†	23	23	45	2.12	+ 1.63	0.77	.....	8	9	6	15	.....	Wm. E. Goodspeed.
Scofield	Carbon	7,625	4	30.8	.....	61	1	− 17	22	55	0.62	.....	0.20	15.0	9	15	0	15	s.	B. Newren.
Springdale	Washington	3,500	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Hattie F. Wood.
Strawberry Tunnel	Wasatch	7,650	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Teasdale	Wayne	7,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Cullum.
Thompsons	Grand	5,150	2	40.9[d]	.....	64[b]	1	23	22†	23	1.54	.....	0.67	T.	6	13	9	8	ne.	Mrs. A. M. Starmont.
Tropic	Garfield	7,000	16	37.6[e]	+ 0.1	65	8	15	23	38	1.16	+ 0.24	0.53	.....	5	7[e]	7[e]	13[e]	sw.	E. P. Bolton.
Trout Creek Ranger	Uinta	9,200	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Forester.
Vernal	....do	5,050	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Dillman.
Victor	Emery	5,250	1	.....	.....	.....	.....	.....	.....	.....	1.31	.....	0.70	.....	3	.....	.....	.....	.....	F. F. Noyes.
White Rocks	Uinta	6,200	1	.....	.....	.....	.....	.....	.....	.....	0.08	.....	0.04	.....	2	8	9	13	.....	E. C. Sims.
Woodside	Emery	4,645	2	40.2	.....	70	1	10	22	47	0.95	.....	0.43	0.8	4	.....	.....	.....	.....	S. M. Miller.
New Mexico.																				
Alma	Socorro	4,800	15	49.2	+ 3.2	80	10	21	5	55	3.03	+ 1.85	1.10	0	5	10	15	5	s.	Max A. Balke.
Aragon	....do	.....	6	39.4	.....	71	7	10	29	54	1.95	.....	0.60	0	6	13	14	3	sw.	John R. Milligan.
Aztec	San Juan	5,590	13	.....	.....	.....	.....	.....	.....	.....	1.09	+ 0.61	0.43	T.	5	9	10	11	sw.	Dr. T. J. West.
Berger's Ranch	McKinley	8,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Herman Berger.
Blackrock	....do	6,500	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Patrick Des Georges.
Bloomfield	San Juan	5,500	20	44.2	+ 4.8	70	10	22	29	41	1.30	+ 0.74	0.34	T.	10	8	13	9	sw.	Fred Le Clerc.
Cambray	Luna	4,215	14	.....	.....	.....	.....	.....	.....	.....	1.80	+ 1.18	0.80	0	4	24	0	6	.....	Agent So. Pac. R. R.
Cliff	Grant	4,470	13	50.1	+ 1.7	72	11†	20	5	46	3.40	+ 2.35	1.50	0	4	.....	.....	.....	.....	W. C. Belden.
Columbus	Luna	4,054	4	.....	.....	74	1	.....	.....	.....	1.44	.....	0.65	0	4	13	6	11	se.	Agent E. P. & S. W. R. R.
Crystal	San Juan	7,400	...	.....	.....	.....	.....	.....	.....	.....	1.29	.....	0.32	2.0	7	7	13	10	e.	J. A. Molohan.
Deming	Luna	4,333	36	52.4	+ 4.3	78	2	28	30	40	1.50	+ 0.96	0.85	0	2	26	1	3	w.	Agent So. Pac. R. R.
Dulce	Rio Arriba	6,767	16	39.6	+ 6.0	63	9†	20	13†	42	2.30	+ 1.55	.....	0	4	17	6	7	w.	E. O. Green.
Farmington	San Juan	5,400	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Orville Ricketts.
Fort Bayard	Grant	6,152	44	47.6	+ 1.2	72	7	27	30	37	2.95	+ 2.17	1.56	T.	9	18	6	6	w.	U. S. Genl. Hospital.
Fruitland	San Juan	4,800	19	44.4	+ 4.9	69	10	22	29	44	1.87	+ 1.47	0.60	0	8	12	14	4	sw.	Cyril J. Collyer.
Gage	Luna	4,480	13	52.9	.....	82	5†	27	29	44	2.54	+ 1.89	1.24	0	4	18	10	2	w.	Agent So. Pac. R. R.
Gila Planting Station	Grant	6,475	2	46.8	.....	72	7	28	29†	35	3.25	.....	1.57	T.	6	18	6	6	w.	U. S. Forest Service.
G. O. S. Ranch	....do	8,000	1	.....	.....	66	2†	18	4†	44	.....	.....	.....	.....	.....	.....	.....	.....	w.	Victor Culberson.
Hachita	....do	4,504	4	.....	.....	.....	.....	.....	.....	.....	2.26	.....	0.70	0	5	26	3	1	e.	Agent E. P. & S. W. R. R.
Haynes	Rio Arriba	6,600	2	39.6	.....	65	11	19	29	44	0.95	.....	0.31	T.	6	10	6	14	nw.	Mrs. O. L. Wingate.
Hermanes	Luna	4,451	4	.....	.....	.....	.....	.....	.....	.....	1.48	.....	0.54	0	6	19	5	6	e.	Agent E. P. & S. W. R. R.
Lordsburg	Grant	4,245	31	51.6	+ 1.1	78	6	28	21	43	3.89	+ 3.30	1.80	0	4	12	7	11	e.	J. H. McClure.
Luna	Socorro	7,300	12	55.8[i]	+ 2.7	69[i]	13	15[i]	29	45[i]	2.36	+ 1.17	0.78	T.	6	10	18	2	w.	C. B. Martin.
Mimbres	Grant	5,007	8	.....	.....	.....	.....	.....	.....	.....	3.14	.....	1.42	0	4	11	16	3	.....	Charles Dennis.
Pinos Altos (near)	....do	7,253	2	.....	.....	.....	.....	18	29	....	4.10	.....	1.32	0.5	8	8	20	2	w.	O. L. Scott.
Pratt	....do	4,415	4	.....	.....	.....	.....	.....	.....	....	2.88	.....	1.50	0	6	20	1	9	sw.	Agent E. P. & S. W. R. R.
Putnam	San Juan	6,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Spader.
Redrock	Grant	4,150	8	.....	.....	.....	.....	.....	.....	.....	3.02	.....	1.13	0	6	16	10	4	.....	Robt. H. Woods.
Rodeo	....do	4,118	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent E. P. & S. W. R. R.
Silver City	....do	5,937	2	45.5	.....	72	7	25	30	38	3.55	.....	1.28	0	8	19	7	4	n.	E. M. Brumback.
Arizona.																				
Allaires Ranch	Cochise	4,184	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Thomas Allaire.
Alpine	Apache	8,500	4	38.0	.....	63	9	17	28	45	1.35	.....	0.30	.....	7	9	10	11	s.	U. S. Forest Service.
Ashfork	Yavapai	5,229	2	.....	.....	.....	.....	.....	.....	.....	1.71	.....	0.41	T.	5	18	4	8	n.	Do.
Aztec	Yuma	492	15	63.7	+ 0.3	96	5	38	29	51	1.10	+ 0.30	0.70	0	3	21	5	4	s.	Agent Southern Pacific Ry.
Benson	Cochise	3,523	32	56.6	+ 1.5	85	7†	30	29†	49	1.62	+ 1.29	0.60	0	5	15	5	10	w.	Do.
Bernardino	....do	4,493	1	.....	.....	.....	.....	.....	.....	.....	3.24	.....	1.80	0	5	4	15	11	n.	Operator E. P. & S. W. R. R.
Bisbee No. 1	....do	5,350	23	.....	.....	.....	.....	.....	.....	.....	4.45	+ 3.80	2.10	0	7	21	6	3	.....	Agent E. P. & S. W. R. R.
Blue	Greenlee	6,500	6	.....	.....	.....	.....	.....	.....	.....	2.28	.....	0.70	0	7	11	2	17	s.	Mary A. Jones.
Bonita	Graham	4,916	39	.....	.....	.....	.....	.....	.....	.....	1.16	+ 0.47	0.60	0	5	12	9	9	s.	A. H. Jelley.
Bowie	Cochise	3,756	37	57.0	+ 4.5	85	8	33	30	40	2.41	+ 1.78	0.98	0	4	14	11	5	n.	Agent Southern Pacific Ry.
Buckeye	Maricopa	980	21	61.8	+ 3.5	89	8	35	29	47	0.96	+ 0.14	0.66	0	4	19	8	3	w.	H. E. Kell.
Canille	Santa Cruz	5,225	4	.....	.....	.....	.....	.....	.....	.....	4.39	.....	1.60	.....	8	4	23	3	sw.	Robert A. Rodgers.
Carr's Ranch	Gila	5,410	1	.....	.....	.....	.....	.....	.....	.....	4.59	.....	0.79	4.0	14	10	11	9	se.	J. C. Carr.
Casa Grande	Pinal	1,396	32	.....	.....	.....	.....	.....	.....	.....	2.10	+ 1.57	1.47	0	4	13	9	8	.....	Agent Southern Pacific Ry.
Casa Grande Ruin	....do	1,422	5	60.1	.....	88	7	33	7	55	2.92	.....	1.36	0	8	11	14	5	e.	Frank Pinkley.
Cavecreek (near)	Maricopa	1,452	6	61.6	.....	88	8	38	29	41	1.84	.....	0.80	0	8	13	7	10	sw.	John B. Lammers.
Chandler	....do	1,213	18	61.8	+ 2.9	89	8†	36	29	44	1.89	+ 1.07	1.05	0	5	18	11	1	se.	F. V. N. Dana.
Chin Lee	Apache	6,090	5	42.0	.....	70	10	20	29	47	0.81	.....	0.21	.....	8	7	3	20	sw.	Rev. L. Ostermann, O. F. M.
Chlarsons Mill	Graham	8,000	6	43.6	.....	63	9	27	21	22	3.80	.....	1.80	2.9	11	2	15	13	.....	Hiram R. Chlarson.
Clifton	Greenlee	3,584	22	57.6	.....	79	7	33	24	39	2.12	+ 1.56	0.50	0	7	18	0	12	.....	Ariz. & New Mexico Ry.
Cline	Gila	2,300	13	57.4	+ 3.5	82	2	35	30	39	3.32	+ 1.78	0.84	0	10	10	15	5	sw.	W. M. Clanton.
Cochise	Cochise	4,219	15	52.8	+ 1.1	77	7	28	29	41	2.31	+ 1.65	1.06	0	7	15	5	10	nw.	Experiment Station Farm.
Columbia	Yavapai	1,900	13	60.4	− 0.3	84	8	40	20†	29[a]	1.95	+ 0.57	0.65	0	8	20	1	9	s.	M. J. Nolan.
Cornville	....do	3,300	1	51.4	.....	82	7	28	28	49	1.36	.....	0.90	0	8	7	11	12	sw.	N. F. Girdner.
Courtland	Cochise	4,543	4	.....	.....	.....	.....	.....	.....	.....	4.23	.....	1.90	0	5	2	20	8	s.	Agent E. P. & S. W. R. R.
Don Luis	....do	5,025	1	.....	.....	.....	.....	.....	.....	.....	3.60	.....	1.85	0	4	12	0	18	ne.	Do.
Dos Cabezos	....do	5,250	5	51.6	.....	72	6†	28	29	36	3.48	.....	1.14	0	7	14	14	2	w.	Neil Erickson.
Douglas	....do	3,930	10	56.3	+ 3.5	85	7	29	5	50	4.24	+ 3.44	1.48	0	8	9	13	8	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204	22	57.2	+ 1.6	80	9	35	30	39	1.94	+ 1.02	0.56	0	12	9	12	9	sw.	George F. Cook.
Elgin (near)	Santa Cruz	4,706	1	.....	.....	.....	.....	.....	.....	.....	2.23	.....	0.85	0	5	5	12	13	se.	Leonard W. Klene.
Fairbank	Cochise	3,862	4	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.35	0	6	15	1	14	.....	Agent E. P. & S. W. R. R.
Flagstaff	Coconino	6,907	21	37.4	+ 2.8	63	6	16	29	40	2.11	+ 0.71	0.39	3.0	14	10	7	13	w.	George T. Herrington.
Flagstaff No. 1	....do	7,500	5	35.6	.....	66	7	12	29	49	1.63	.....	0.32	8.0	11	11	6	13	se.	U. S. Forest Service.
Florence	Pinal	1,504	14	61.8	+ 3.9	88	7	38	28†	42	3.03	+ 2.62	1.39	0	7	8	4	18	s.	Agt. Arizona Eastern R. R.
Fort Apache	Navajo	5,200	42	47.6	+ 2.8	78	7	21	28	51	1.13	+ 0.02	0.40	0.1	12	15	4	11	nw.	Post Surgeon U. S. Army.
Fort Huachuca	Cochise	5,100	28	50.6	− 2.0	78	5	28	21†	48	3.79	+ 2.84	1.15	0	7	22	0	8	se.	Do.
Fort Mohave	Mohave	604	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	August F. Duclos.
Gila Bend	Maricopa	737	23	64.0	+ 4.9	92	5†	37	28	46	1.24	+ 0.83	0.89	0	5	15	6	9	e.	Agt. Southern Pacific Ry.
Globe	Gila	3,625	11	55.7	+ 2.2	82	7	35	29	36	1.73	+ 0.54	0.26	0	13	9	16	5	se.	Dr. B. G. Fox.
Grand Canyon	Coconino	6,866	9	37.8	.....	59	20	18	30	32	2.70	.....	1.50	3.0	5	6	21	3	sw.	Agent Grand Canyon R. R.
Grand Canyon No. 1	....do	3,676	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. W. Zachau.
Granite Reef Dam	Maricopa	1,325	20	62.5	+ 0.1	87	7	38	29	43	2.43	+ 1.73	0.65	0	9	13	8	9	w.	U. S. Reclamation Service.
Greer	Apache	9,200	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Hackberry	Mohave	4,500	1	.....	.....	.....	.....	.....	.....	.....	1.63	.....	0.76	0	8	14	7	9	nw.	A. N. Keech.
Hereford	Cochise	4,180	4	.....	.....	.....	.....	.....	.....	.....	1.41	.....	0.48	(	6	18	5	7	nw.	Agent E. P. & S. W. R. R.

TABLE 1.—*Climatological data for November, 1913. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Arizona—Continued.																				
Holbrook	Navajo	5,069	23	38.2	− 4.9	53	2†	20	22†	32	0.30	− 0.52	0.10	.....	4	9	5	16	sw.	Thorwald Larson.
Indian Oasis	Pima	3,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph Menager.
Intake	Gila	2,230	6	.....	.....	.....	.....	.....	.....	.....	1.95	.....	0.40	0	6	15	2	13	nw.	U. S. Reclamation Service.
Jerome	Yavapai	4,743	16	.....	.....	.....	.....	32	20	.....	3.18	+ 1.73	1.00	.....	.....	.....	.....	.....	.....	Dr. L. A. Hawkins.
Keams Canyon	Navajo	6,600	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fred A. Bartram.
Kingman	Mohave	3,326	10	53.7	+ 0.6	81	8	34	22†	35	1.08	+ 0.37	0.45	0	4	16	5	9	.....	Agent A., T. & S. F. Ry.
Lakeside	Navajo	6,500	15	40.4	.....	66	6	21	4†	44	2.57	+ 1.49	0.73	2.0	11	10	11	9	sw.	Jesse H. Rogers.
Lewis Springs	Cochise	4,029	4	.....	.....	.....	.....	.....	.....	.....	2.17	.....	0.90	0	4	8	11	11	.....	Agent E. P. & S. W. R. R.
Lowell Observatory	Coconino	7,180	2	.....	.....	.....	.....	.....	.....	.....	2.16	.....	0.47	.....	14	8	9	13	.....	Vesto M. Slipher.
McNeal	Cochise	4,150	3	.....	.....	.....	.....	.....	.....	.....	4.16	.....	1.48	0	6	14	12	4	se.	George J. Jones.
Maricopa	Pinal	1,186	37	61.4	+ 2.1	94	2	35	28	53	1.20	+ 0.61	0.60	0	3	15	8	7	w.	Agent Southern Pacific Ry.
Marinette	Maricopa	1,150	1	59.3	.....	88	8	38	29	45	1.11	.....	0.45	0	6	9	10	11	sw.	Theodore Katzenstein.
Moccasin	Mohave	4,500	1	44.8	.....	70	7†	18	29	42	1.78	.....	0.45	0	6	12	7	11	w.	J. G. Maxwell.
Mohawk	Yuma	538	13	65.4	− 1.0	88	3	46	29†	36	0.41	+ 0.18	0.28	0	2	19	4	7	e.	Agent Southern Pacific Ry.
Naco	Cochise	4,579	4	.....	.....	.....	.....	.....	.....	.....	3.40	.....	1.30	0	8	14	0	16	sw.	Agent E. P. & S. W. R. R.
Natural Bridge	Gila	4,990	24	.....	.....	.....	.....	.....	.....	.....	4.33	+ 2.47	1.45	0	10	14	10	6	sw.	D. G. Goodfellow.
Nutrioso	Apache	8,000	3	.....	.....	.....	.....	.....	.....	.....	1.45	.....	0.29	0.7	10	11	7	12	sw.	U. S. Forest Service.
Oracle	Pinal	4,502	19	54.1	+ 0.2	76	7	33	20†	29	2.57	+ 1.31	0.77	0	9	7	4	19	sw.	J. W. Lawson.
Osborn	Cochise	4,676	4	.....	.....	.....	.....	.....	.....	.....	4.33	.....	1.80	0	6	14	0	16	nw.	Agent E. P. & S. W. R. R.
Paradise	Pinal	5,436	7	46.4	.....	74	7	20	29	43	3.38	.....	.....	.....	7	7	16	7	nw.	J. C. Hancock.
Parker	Yuma	345	17	61.0	+ 0.3	98	6	32	23†	58•	1.49	+ 0.94	0.87	0	5	11	3	16	.....	M. A. Israel, M. D.
Payson	Gila	5,550	5	47.8	.....	79	9	22	29	50	5.19	.....	1.69	0	10	11	4	15	s.	Mart McDonald.
Pearce (near)	Cochise	4,400	1	53.4	.....	77	7	32	21	38	2.17	.....	1.04	0	6	16	9	5	w.	Clarence H. Wilson.
Phoenix	Maricopa	1,108	19	61.6	+ 2.9	86	8	41	29	35	0.83	− 0.13	0.53	0	8	15	3	12	e.	U. S. Weather Bureau.
Phoenix (1)	.....do	1,092	23	60.6	+ 3.5	88	8	33	29	46	1.29	+ 0.51	0.60	0	7	12	9	9	w.	David Aepli.
Phoenix (2)	.....do	1,189	5	62.5	.....	88	8†	39	29	38	1.27	.....	0.80	0	7	12	9	9	sw.	Salt River Valley Nurseries.
Pinal Ranch	Pinal	4,520	19	.....	.....	.....	.....	.....	.....	.....	3.63	+ 1.32	1.09	1.5	10	.....	.....	.....	.....	Irion & Craig.
Pinedale	Navajo	6,500	1	.....	.....	.....	.....	.....	.....	.....	2.37	.....	0.53	5.0	10	10	5	15	sw.	E. Thomas, jr.
Pinto	Apache	5,660	9	.....	.....	.....	.....	.....	.....	.....	1.73	.....	0.67	0	9	12	4	14	sw.	Celia F. Henning.
Prescott	Yavapai	5,320	46	44.5	+ 1.7	73	7	20	29	44	1.23	+ 0.14	0.38	T.	9	13	5	12	.....	Dr. J. W. Flinn.
Prescott Dry Farm	.....do	5,008	1	47.5	.....	75	7†	26	29	43	0.63	.....	0.40	T.	5	10	10	10	s.	L. L. Bates.
Quartzite	Yuma	800	6	60.0	.....	89	10	36	29	44	1.06	.....	0.82	0	3	13	11	6	w.	W. E. Scott.
Redrock	Pinal	1,864	4	.....	.....	.....	.....	.....	.....	.....	2.27	.....	1.10	0	5	22	1	7	w.	Agent Southern Pacific Ry.
Rice	Gila	2,540	30	56.4	+ 3.8	84	7	32	29	49	1.26	+ 0.42	0.32	0	10	14	5	11	se.	Arthur Pritchard.
Roosevelt	.....do	2,175	9	60.0	.....	83	7	41	29	34[b]	2.66	.....	0.75	0	9	6	10	14	w.	U. S. Reclamation Service.
Sacaton	Pinal	1,280	6	61.6	.....	89	9	38	29	47	2.63	.....	1.36	0	5	14	7	9	w.	E. W. Hudson.
St. Johns	Apache	5,650	9	42.6	.....	67	5	25	29	40	1.45	.....	0.55	.....	5	12	0	18	sw.	Alexander Shreeve.
St. Michaels	.....do	6,950	26	40.6	+ 4.7	66	8	17	29	41	1.55	+ 0.61	0.66	T.	5	11	8	11	sw.	Rev. Anselm Weber, O. F. M.
Salome	Yuma	1,875	6	59.2	.....	88	7†	35	30	47	0.96	.....	0.48	0	3	16	6	8	s.	August Nord.
San Simon	Cochise	3,609	27	58.4	+ 3.4	88	2†	30	30	54	1.75	+ 1.41	0.90	0	2	20	8	2	w.	Agent Southern Pacific Ry.
Seligman	Yavapai	5,219	8	46.6	.....	77	8	22	29	45	1.77	.....	0.38	0	11	13	9	8	s.	Librarian A., T. & S. F. Ry.
Sentinel	Maricopa	685	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent Southern Pacific Ry.
Silverbell	Pima	2,664	8	.....	.....	81	7	.....	.....	.....	2.17	.....	0.93	0	6	17	3	10	.....	Imperial Copper Co.
Snowflake	Navajo	5,644	6	47.1	.....	72	2†	15	30	50	0.85	.....	0.25	T.	6	17	1	12	sw.	William J. Flake.
Springerville	Apache	6,862	3	42.0	.....	69	1	15	29	44[a]	0.78	.....	0.25	0.5	5	12	8	10	w.	U. S. Forest Service.
Supai	Coconino	3,200	7	53.4	.....	78	3	32	23	35[a]	1.15	.....	0.44	0	7	6	3	21	.....	Laura B. Symons.
Tempe	Maricopa	1,165	9	60.7	.....	87	1†	37	29	46	1.45	.....	0.43	0	9	13	9	8	nw.	F. H. Simmons.
Thatcher	Graham	2,800	10	57.6	+ 5.3	82	7†	30	21	48	1.33	+ 0.41	0.40	0	6	8	21	1	se.	J. H. Larson.
Thomas	Coconino	5,200	1	.....	.....	.....	.....	.....	.....	.....	5.75	.....	1.35	1.5	14	11	8	11	sw.	L. H. Thomas.
Tombstone	Cochise	4,550	18	55.6	+ 1.3	77	7	37	29	30	2.80	+ 2.23	0.92	0	5	13	12	5	.....	F. N. Wolcott.
Truxton	Mohave	3,997	3	50.8	.....	89	10	27	29	41	1.35	.....	0.50	0	8	17	6	7	s.	Truxton Canyon Indian Sch.
Tuba	Coconino	4,500	13	45.5	+ 2.2	72	7	21	29	41	0.85	+ 0.21	0.33	T.	13	14	9	7	sw.	Ira Bell.
Tucson	Pima	2,390	33	59.5	+ 1.2	85	9	35	29	42	1.98	+ 1.22	0.50	0	10	8	8	14	e.	University of Arizona.
Tucson (1)	.....do	2,380	5	59.2	.....	86	7†	32	28†	37[d]	2.04	.....	0.57	0	13	14	9	7	nw.	Rev. James F. Record.
Tucson (2)	.....do	2,526	4	59.2	.....	86	9	33	29	44	2.01	.....	0.52	0	9	11	7	12	w.	U. S. Coast & Geod. Survey.
Vail	.....do	3,421	14	.....	.....	77	9	.....	.....	.....	1.20	+ 0.44	0.90	0	3	.....	.....	.....	.....	Agent Southern Pacific Ry.
Walnut Grove	Yavapai	3,649	20	.....	.....	.....	.....	.....	.....	.....	2.63	+ 1.02	.....	0	7	.....	.....	.....	.....	J. O. Carter.
Wickenburg	Maricopa	2,072	15	57.1	+ 2.8	87	7	33	29	45	1.83	+ 1.31	0.99	0	9	12	0	18	.....	Agent S. F. P. & P. Ry.
Willcox	Cochise	4,164	32	51.6	− 0.5	80	2†	29	30	46	2.15	+ 1.69	1.55	0	3	1	8	21	s.	Agent Southern Pacific Ry.
Williams	Coconino	6,750	13	42.6	+ 0.8	70	10	20	30	40	3.17	+ 1.82	0.87	4.5	9	12	9	9	sw.	E. J. Nordyke.
Winslow	Navajo	4,855	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Winslow High School.
Yuma	Yuma	141	33	63.6	+ 1.7	91	9	41	29	39	0.15	− 0.17	0.15	0	1	25	3	2	n.	U. S. Weather Bureau.
Yuma (1)	.....do	150	6	60.3	.....	88	8†	32	29	44	0.41	.....	0.38	0	2	22	5	3	n.	C. J. Wood.
Nevada.																				
Caliente	Lincoln	4,407	3	42.7	.....	70	7	20	9	49	1.06	.....	1.00	0	4	26	0	4	ne.	Salt Lake Route.
Las Vegas	Clark	2,033	11	54.1	+ 5.3	81	9	30	30	39	1.09	+ 0.87	0.47	0	4	18	6	6	s.	C. P. Squires.
Logan	.....do	1,355	6	55.6	.....	89	12	28	29	46	0.42	.....	0.16	0	5	17	8	5	n.	Orin W. Jarvis.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November 1913. District No. 9, Colorado Valley.*

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wyoming.																																
Big Piney	Green																															
Daniel	do																															
Eden	do		.04										.15		.04																	0.23
Green River	do			.02		.03					T.			T.						T.								T.				0.05
Pinedale	do																															
Wamsutter	do		.01				.05						.02	.08							.04	.03						.03				0.26
Willow Creek Cabin	do		.10			T.	.34				T.		.20	.28					T.	.11	.06		.13			.08	T.			T.	T.	1.30
Colorado.																																
Ashcroft	Grand		T.	.03				.05					.05	.05	.10	.10				T.	.05	.10	.20						.10	.03		0.86
Aspen	do																															
Blue Valley Ranch	Yampa		T.	T.				.14						.67						T.	.20					T.			T.			1.01
Cascade	San Juan		.11	.80	.02								.13	.44	.10			T.		.17	.71	.12	.05		.30	.18			.12		T.	3.25
Cedaredge	Gunnison		.14	.28										.65	.15	.03					.13					.20			.50			2.08
Cochetopa	do			T.										T.															T.			T.
Colbran	Grand		.01	.06									T.	.89				T.	T.		.05	.19	.18			.06			.14	T.		1.60
Columbine	Yampa		.07	.19			.09						.07								.08	.22							.05			0.77
Columbine Ranch	Gunnison													.30	.80	.02					.20	.35	.30				.09			.30			2.36
Cortez	San Juan			.50							T.		.50	.50						T.	.50	T.										2.00
Crawford (near)	Gunnison		.17											.30	.20	.09					.17								.23			1.16
Crested Butte	do		T.	.16				.20					.08	.18	.15					T.	.14	.10	.15						T.			1.16
Delta	do	*	.13										.03	.42	.03	.05				.03	.12	.01		.02	.03	.02			.10			0.97
Dillon	Grand			.08				.41							.07							T.	.02									0.58
Durango	San Juan		.21	1.02									.04	.55				.03		.26	.28	.10	.07		.54	.11			.05		.10	3.36
Eureka	do			.17									.20	T.					.64	.10					.11							1.22
Fraser	Grand							.20						T.	.25							.02	.02							.03		0.52
Fruita	do		.06	.25	T.								T.	.56						.04	.03	.11	.16		T.	.02			.25		T.	1.48
Glade Park	do		.03	.10	T.							T.	.05	.60	.03						.24			.02	.02			.40		T.		1.49
Gladstone	San Juan		.09	.71									T.	.30	.14	T.		T.	.12	.14	.75	.12	T.		.35	T.			.04	T.		2.76
Glen'd Spr'gs (near)	Grand													T.	.40	.30						.06	.10		T.	.06					T.	0.92
Grand Junction	do		T.	.19								T.	.12	.32	.02					.01	.02	.30			T.	.05	T.		.12			1.15
Grandlake	do						T.	.12					T.	.52	.17					T.	.11	T.							T.	T.		0.92
Grand Valley	do		.07	.05									.06	.87	.45	.01		.01		.08	.28	.14			.10	.14		.01	.08			2.35
Gunnison	Gunnison			.02									.03		T.	.05					.01								T.			0.11
Hayden	Yampa		.03	.23				.22						.38	.15						.40								.22			1.63
Hesperus (near)	La Plata			.98	.09								T.	.40	.13					.42		.10		.15	.83				.04			3.14
Horsefly	Gunnison			.30	.38								.10	.48	.25	.15					.70				T.				.75	.25	T.	3.36
Ironton	do		T.	.40									T.	T.						T.	.40	T.							.30			1.10
Lake City	do			.18											T.						.10					.04			T.			0.32
Lay	Yampa		T.	.21										.49	T.	T.						.56							.27			1.53
Mancos	San Juan																															
Marble	Grand		*	.29									.19	.44	.35	.07					.15	.34	.20			.09			.09			2.21
Marshall Pass	Gunnison		.17												.18														.27			0.62
Meeker (near)	White		T.		T.			T.				*	*	.61	.25						*	*	.73						.21			1.80
Montrose	Gunnison			.11										.05	.13	.07					.07		.03						.30			0.76
Nast	Grand			T.				.06					T.	T.	.13	.06					T.	.06	.12						T.	.12		0.55
Pagosa Springs	San Juan		T.	.70	.15								.07	.04	.27			.02		.23	.42	.07	.03		.31	.24			T.	.02		2.57
Palisades	Grand		T.	.18	T.								.08	.79	T.					T.	.06	.18	.15			.08	T.		.25			1.77
Paonia	Gunnison		.15										.04	.47	.35	.06					.22	.18	.18						.28			1.93
Pitkin	do			T.			.14						T.								.11	.12			.05				T.			0.42
Redcliff	Grand																															
Redvale	San Miguel		T.	.46	.16								.46					T.		.10	.15								.46			1.79
Rico	Dolores		.13	.31				.63			.25						T.						.46					.06	.02	.02	.15	2.03
Rifle	Grand		.03	.03										.83	.15	.01		T.			.08	.10	.05			.01			.05			1.34
River Portal	Gunnison		.06	.15								.05	.14	.06	.25	.18					.24	.09	.12			T.			.10			1.44
Sapinero (near)	do		.03	.17	.01								.07	.17	.18	.10					.02	.03	.03						.10	T.		0.91
Shoshone	Grand		.04	.10									.09	.94	.10						.06	.60	.08			.04			.03			2.08
Silverton (near)	San Juan		.07	.55										.20	.10	T.		T.		.12	.64	.08	T.		.30	T.			T.	T.		2.06
Spruce Lodge	Grand			.06				.89					T.	.09	.20	.09					T.	.06	.12			T.			.11	.05		1.67
Steamboat Springs	Yampa		.10				T.						.90	.12	.19						.46					T.		.07	.40			2.24
Tacoma	San Juan		.08	.68	.09								.03	.71	.07	.11				.15	.42	.06	.05		.30	.02			.10			2.87
Telluride	San Miguel		.02	.39	T.								T.	.10	T.					.02	.07	T.	T.		T.			T.	.29	.14		1.03
Terminal Dam	San Juan			.79	.06									.86	.11					.18	.45	.08	.02		.32	.12			.10			3.09
Yampa (near)	Yampa							.38						*	.37					.03		.14	.11						T.			4.03
Utah.																																
Bluff	San Juan																															
Boneta	Green			.20							.30	.10								.10		.20						.10			.10	1.10
Canaan	Colorado																															
Castle Dale	Green	.07	1.10								.10			.16																		1.43
Cisco	Grand													.60													.20			.21		1.01
Dragon	Green		T.	.17	T.								.07		.50	.11			T.	T.	.10	.35				.02			.02		.02	1.36
Duchesne	do		T.	.58									T.	T.	.65					.09	T.								T.		.25	1.57
Elkhorn	do																															
Emery	Colorado												T.	T.					20													0.20
Escalante	do																															
Fort Duchesne	Green			.05										T.	.15										.05						.15	0.40
Fruitland	do																															
Grayson	San Juan		.10	.55	.04								T.	.12	.71			.08		T.	.19	.35	.03			.20	.41			.06			2.84
Green River	Green		.03	.23									T.		.17							.05	T.				.05				.10	0.63
Hanksville	Colorado																															
Hite	do		T.	.27	T.								T.	T.	.30			.03		T.		T.			.02	.04						0.66
Hurricane	do		.70								.40	.35	.60	.45	.35					.15	.10											3.10
Kanab	do		.60									.33	.33	.82							.12	.20											2.40
La Sal	Grand			.45	.04							T.	T.	.71	T.		T.			T.	.03	T.	T.		T.	.15			T.			1.38
Leeds (near)	Colorado		1.60									.32	1.16	.20						.25	.30	.10			T.						T.	3.93
Loa	do																															
Manila	Green			.23			.19	.08						.09	.02						.08	.23									.10	1.02
Moab	Grand	T.	.16	.13										.76							.06	.04			.04	.07			.13			1.19
Monticello	do																															
New Harmony	Colorado											1.20	.80	.35						.10	.75											3.20
Orderville	do		.50	.33								.47	.35	.50	.17					.10	.12	.25			.08	.06					.03	2.96
Pine Valley	do	.15	.83	T.								.25	.53	.16	.08				.30	.25	.05	T.			.15				T.	.15	.03	2.93
Price	Green		*	.97																.56	.29										.02	1.84
Ranch	Colorado		1.21									1.20	1.42	.64	.14						.64				.63							5.88
San Rafael	Green																															
St. George	Colorado		.37									.29	.77	.07						.20	.07				.05						.30	2.12
Scofield	Green			.20								.03		.08						T.	.03					.05	.01	*	.19		.03	0.62
Springdale	Colorado																															

TABLE 2.—*Daily precipitation for November, 1913. District No. 9*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Utah—Continued.																																
Strawberry Tunnel	Green																															
Teasdale	Colorado																															
Thompsons	Green		.16	.29	.14									.67						T.	.07	.21			T.	T.					T.	1.54
Tropic	Colorado											T.	.35	.53	T.				T.	T.	T.	.17				T.	.07	.04				1.16
Troutcreek Ranger	Green																															
Vernal	do																															
Victor	do		.70											.32						.29												1.31
White Rocks	do		.04	T.									T.	.04	T.														T.			0.08
Woodside	do		.43												.34							.10									.08	0.95
New Mexico.																																
Alma	Gila		T.	T.											T.	*	1.10	.52			.50				.91				T.			3.03
Aragon	do	T.		.10											.10		.60	.10			.55				.50							1.95
Aztec	San Juan		T.	.43									.07	T.				T.		.30	.07	T.			.22				T.			1.09
Berger's Ranch	Little Colorado																															
Blackrock	do																															
Bloomfield	San Juan	T.	.01	.29									.16	T.	.05			.04	.01	.34	.12	T.			.21	T.			.07			1.30
Cambray	Mimbres																		.80		.20				.70	.10						1.80
Cliff	Gila																1.50	.75			.45			.70								3.40
Columbus	Mimbres																.65				.15			.53	.11							1.44
Crystal	San Juan			.25									.24		.17					.18		.32			.06	.07						1.29
Deming	Mimbres																.85								.65							1.50
Dulce	San Juan			.80																												‡2.30
Farmington	do																															
Fort Bayard	Mimbres			.02												T.	1.56	.69	.01	*	.25		*	.39					.03			2.95
Fruitland	San Juan		T.	.45									.60	.05	.15			.03		.24	.20	T.			.15							1.87
Gage	Mimbres															.30	1.24			.50				.50								2.54
Gila Planting Sta	do			.02												T.	1.57	.75			.40		T.	T.	.48				.03			3.25
G. O. S. Ranch	Gila																															
Hachita	do	.20															.53	.49			.34			T.	.70							2.26
Haynes	San Juan			.05	T.							T.	T.		.08					.22	.22	T.		.31	.07				T.		T.	0.95
Hermanes	Mimbres	.24													.04	.11	.54							.45	.10							1.48
Lordsburg	Gila															1.20	1.80			.17					.72							3.89
Luna	do																.51	.24		T.	.58			.11	.78	.14			T.	T.		2.36
Mimbres	Mimbres																1.42	.68			.45				.59							3.14
Pinos Altos (near)	Gila														.08		1.13	1.32	.10		.70				.25	.40			.12			4.10
Pratt	do	.20														*	1.50	.58			.25				.35							2.88
Putnam	San Juan																															
Redrock	Gila														.02		.92	1.13			.47			.43	.05							3.02
Rodeo	do																															
Silver City	Mimbres														T.	.48	1.28	.72			.33		.02	.45	.24				.03			3.55
Arizona.																																
Allaires Ranch	Desert																															
Alpine	Gila			.23													.20		.10	.30		.15		.20	.17							1.35
Ashford	Verde		.25									.38		.41							.37	.30									T.	1.71
Aztec	Gila											.30								.70		.10										1.10
Benson	San Pedro	.22														.60	.55			.10				.15								1.62
Bernardino	Sonora															1.80		.75			.21			.36	.12							3.24
Bisbee (1)	San Pedro	.16									.20						2.10	1.00			.22			.32	.45							4.45
Blue	Gila														.10	.15	.70	.30					.13		.70	.20					T.	2.28
Bonita	do															.15	.60			.15			.20								.06	1.16
Bowie	do																.98	.68				.70			.05							2.41
Buckeye	do			.05								T.	T.	.15	T.	T.			.10	.66												0.96
Canille	San Pedro	.03							T.		.10				.06	1.01	.87			T.	1.60			.50	.22						T.	4.39
Carr's Ranch	Salt			.21								.17	.43	.68	.45	.05	.79	.30		.49	.33	.05		.34	.24						.06	4.59
Casa Grande	Gila											.07						1.47		.03	.53											2.10
Casa Grande Ruin	do											T.	.20		.04	T.	.28	1.36		.42	.45			.09	.08							2.92
Cavecreek (near)	Salt		T.									.01	.11	.04	.03		.70		T.	.80	.10	T.			.05							1.84
Chandler	do													T.	.13		1.05		.09	.56				.06								1.89
Chin Lee	Little Colorado		.01	.06								T.	T.	.11	.02		T.			.15	.11	T.	T.		.14	.21		T.	T.			0.81
Chlarsons Mill	Gila													T.	.27	.33	1.80	.49		.08	.29	.07	.09	.12	.18	.08					T.	3.80
Clifton	do													T.	T.	.20	.50	.46					.21	.22	.33	.20						2.12
Cline	Salt								.05					.75	.15	T.	.84	.56		.40	.32	.05		.15	.05							3.32
Cochise	Desert	.26													.04		1.06	.47			.09		.18		.21							2.31
Columbia	Agua Fria			.10									.10	.50	.10	.15				.65	.25	.10										1.95
Cornville	Verde		.06									T.	.90	.10			.05	.01	T.	T.	T.				.19	.01	.04					1.36
Courtland	White	.50													1.40	1.90				.18			.25									4.23
Don Luis	San Pedro														1.85			.90			.05				.80							3.60
Dos Cabezos	Desert	.13													.08		1.14	1.07			.87			.14	.05							3.48
Douglas	White	.43									.25			T.		.12	1.48	1.29	T.	T.	.15			.24	.28							4.24
Dudleyville	Gila											T.	.01	.02	.54	.02	.15	.31		.02	.44	.04		.05	.25						.09	1.94
Elgin	San Pedro								T.					T.		.85	.69		T.	.23			.35	.11						T.	2.23
Fairbank	do															.02	.07	.05			.01			.35	.20							0.70
Flagstaff	Little Colorado		.20	.20								.21	.12	.31			.21	.02	.01	.39	.01	.05		T.	.26	.07					.05	2.11
Flagstaff	do			.30	.02							.32	.09	.19			.06	.09		.01	.17	.06	T.			.32						1.63
Florence	Gila											.21		.32			1.39			.76				.23	.10						.02	3.03
Fort Apache	Salt		.20									.02		.06	.10	.20	.05			.40	.01		.01	.01	.06						.01	1.13
Fort Huachuca	San Pedro	.24										.10					.90	1.15			.54			.62	.24							3.79
Fort Mohave	Colorado																															
Gila Bend	Gila											T.	.11		T.		.02		.89	.20	.02											1.24
Globe	Salt			.10									.15	.08	.19	.08	.22	.26		.10	.20			.17	.13	.03				.02		1.73
Grand Canyon	Colorado		T.								.40	.25	T.			T.		.25		T.	1.50	T.			T.				.30	T.		2.70
Grand Canyon (1)	do																															
Granite Reef Dam	Salt			.11									.05	.18	.09		.09	.65		.60	.43				.23							2.43
Greer	Little Colorado																															
Hackberry	Desert		.20	.13								.09	.76		.03					.22	.07				T.						.13	1.63
Hereford	San Pedro										.17				.08	.39	.48					.19	.10									1.41
Holbrook	Little Colorado										.10	.08				.10							.02		T.					T.		0.30
Indian Oasis	Desert																															
Intake	Salt											.25			.35		.25				.35		.40			.35						1.95
Jerome	Verde														.56		.21			1.00	.54	.12		.60	.15							3.18
Keams Canyon	Little Colorado																															
Kingman	Colorado		.22								T.		.29							.45	T.	.12			T.							1.08
Lakeside	Little Colorado			.22								.07	.28	.06	.47	.11	.12	T.		.26	.73	.10		T.	.15							2.57
Lewis Springs	San Pedro															.90	.01						.90		.36							2.17
Lowell Observatory	Little Colorado			.18	.20							.15	.13	.47	.01		.23	.01		.22	.20	.02			.24	.06					.04	2.16
McNeal	White	.46															1.48	1.37			.26		.32		.27							4.16
Maricopa	Gila											.22	T.	T.	T.	T.	.38			.60				T.							T.	1.20

TABLE 2.—*Daily precipitation for November, 1913. District No. 9*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Arizona—Contd.																																
Marinette	Agua Fria											.15	.15	T.			.17			.45	.18	.01		T.	T.							1.11
Moccasin	Colorado		.23	.20								.37	.21	.45								.32										1.78
Mohawk	Gila											.13								.28				T.								0.41
Naco	San Pedro	.13									.18				.10		1.30	0.75			.20			.30	.44							3.40
Natural Bridge	Verde		.13									.10	.54	.17	.13	1.45	T.			1.19		.14		.25	.23							4.33
Nutrioso	Little Colorado			.27								.16		.01	.11	.19	.05	.02		.29			.07		.28			T.			T.	1.45
Oracle	San Pedro												.01		.25	.02		.66		.05	.77			.36	.18						.27	2.57
Osborn	do										.19	.04		T.		1.50	1.80							.40	.40							4.33
Paradise	Desert	.24														*	*	2.31			.28			.25	.30							3.38
Parker	Colorado											.12						.10	.25	.87				.15								1.49
Payson	Verde			.25								T.	.54	.22		T.	1.69	.59		1.03	.25	.12		.28	.22							5.19
Pearce (near)	Desert	.24													T.	T.	1.04	.37		T.	.12			.16	.24							2.17
Phoenix	Salt		T.									.04		.03	T.	T.	.11	.06	T.	.46	.10	.01		.02	T.							0.83
Phoenix (1)	do											T.	.02	.06	.16	T.	.15			.60	.28	T.	.02		T.						T.	1.29
Phoenix (2)	do											.11		.05	.05		.06		.18	.80		T.	T.	.02								1.27
Pinal Ranch	Gila											.23		.71		.46	.40			1.09	.20		.16	.03	.20						.15	3.63
Pinedale	Little Colorado			.25									.10	.30	.10		.19			.53	.47			.07	.26						.10	2.37
Pinto	do											.10	.67	.10	.10	T.		T.	T.	.20	.15	.10			.21						.10	1.73
Prescott	Verde		.05	T.								.28	.09	.09			.07			.38	.14	T.			.06						.07	1.23
Prescott Dry Farm	do											.12		.01			.08			.40		.02									T.	0.63
Quartzsite	Colorado																			.82	.02			.22								1.06
Redrock	Santa Cruz														.20	T.	1.10			.70			.15	.12							T.	2.27
Rice	Gila											T.	T.	T.	.03	.07	.10	.12		.18	.15	.02		.32	.23	.04					T.	1.26
Roosevelt	Salt											.15	.29	.11				.30	.75	.19	.50			.32	.05							2.66
Sacaton	Gila											.08	T.			T.	.42	1.36		.37	.40											2.63
St. Johns	Little Colorado	.25		.55										.30							.15				.20							1.45
St. Michaels	do	.25	T.	.27								T.	T.	.07	T.			T.		.66		T.	T.		.30				T.			1.55
Salome	Desert											.48	.02							.46												0.96
San Simon	Gila																.90	.85														1.75
Seligman	Verde		.21	.07								.05	.33	.33	.02		.05			.38	.20	.04			.09							1.77
Sentinel	Gila																															
Silverbell	Santa Cruz													.54		T.	.08	.93		.10	.42				.10						T.	2.17
Snowflake	Little Colorado													.10	.25	.25	.15				.05	T.	T.								.05	0.85
Springerville	do			.20											T.	.18				.25		*			.10				T.		.05	0.78
Supai	Colorado				.27							.12	.44	.08		.02	.10				.12											1.15
Tempe	Salt																															
Thatcher	Gila																.38	.40		T.	.10			.30	.10	.05						1.33
Thomas	Verde		T.	.52								.54	.48	.61	.08		.43	.02		.44	1.35	.75		.02	.40	.06					.05	5.75
Tombstone	San Pedro															.92	.90		.10				.35	.53								2.80
Truxton	Desert		.50									.18	.08	.02						.30	.03	.20			.04							1.35
Tuba	Little Colorado		T.	.09								T.	.33	.05	T.		.08	.03	.01	.01	.18	.01			.02	.02		.01			.01	0.85
Tucson	Santa Cruz	T.												.05	.17	.07	.40	.50		.05	.30			.31	.09						.04	1.98
Tucson (1)	do											.03		.03	.19	.02	.39	.57		.20	.14	.01		.25	.08	.09					.04	2.04
Tucson (2)	do											T.		T.	.18	T.	.50	.52	.01	.07	.33	T.		.32	.06						.02	2.01
Vail	do															.90	*			‡30												1.20
Walnut Grove	Hassayampa		.20									.55		.60						*	*	1.18		.10								2.63
Wickenburg	do		.11									.39		.13	.01		.10			.99		.01		.05	.04							1.83
Willcox	Desert																	1.55						.30	.30							2.15
Williams	Colorado			.54								.12	.46	.87			.16			.23	.44	.10	T.								.25	3.17
Winslow	Little Colorado																															
Yuma	Colorado														T.	T.				.15				T.								0.15
Yuma (1)	do															T.	.03	T.	T.	.38				T.								0.41
Nevada.																																
Caliente	Colorado		.06									T.											*	*	1.00							1.06
Las Vegas	do		.15										T.							.47	.15				T.						.32	1.09
Logan	do		.07											.08	T.					.16	.06					T.					.05	0.42

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 9, Colorado Valley.*

Date.	Wyoming.				Colorado.										Utah.										New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George.		Bloomfield.		Fort Bayard.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	49	27	59	28	67	31	59	10	66	22	58	22	65	30	56	41	76	38	68	31	76	31	67	34	60	35
2	.....	.....	50	33	53	31	53	42	56	7	62	21	48	27	62	33	46	20	70	46	58	39	57	45	63	37	65	34
3	.....	.....	50	46	40	33	60	42	67	30	51	30	51	34	61	35	46	20	55	47	57	40	63	36	48	37	63	40
4	.....	.....	53	25	45	33	54	39	60	17	45	31	50	29	60	32	45	15	66	45	59	45	69	31	54	33	61	22
5	.....	.....	46	31	54	26	60	35	53	13	59	28	53	23	65	37	60	20	66	38	63	25	69	34	60	31	66	29
6	.....	.....	59	22	59	27	60	34	59	19	65	28	54	23	61	35	49	15	72	46	67	35	71	35	64	30	70	38
7	.....	.....	61	20	65	28	64	36	54	23	60	30	45	33	60	36	60	24	73	40	69	34	75	32	63	29	72	42
8	.....	.....	59	21	59	28	62	35	58	9	57	20	52	18	62	33	62	23	71	40	68	31	76	36	65	32	65	40
9	.....	.....	54	23	61	27	65	34	55	10	56	24	59	19	58	32	60	22	69	37	68	29	76	29	65	25	65	31
10	.....	.....	47	22	63	28	61	28	59	7	63	28	63	18	60	37	61	25	70	36	64	27	74	30	70	29	64	36
11	.....	.....	39	26	61	28	62	32	60	15	64	23	54	22	62	39	40	15	70	37	70	31	67	45	68	30	66	38
12	.....	.....	45	24	57	38	58	35	61	12	54	34	50	32	56	35	75	25	67	49	67	35	63	48	64	37	66	42
13	.....	.....	42	22	49	39	54	41	55	27	48	32	42	32	51	36	51	20	63	46	64	43	61	49	59	41	62	42
14	.....	.....	48	20	50	35	53	39	60	24	45	32	44	33	52	31	56	21	63	37	60	37	63	40	60	36	64	41
15	.....	.....	44	21	49	29	55	32	49	26	47	22	36	28	51	32	48	22	62	36	56	30	63	32	51	31	66	40
16	.....	.....	48	24	48	26	47	32	38	8	49	18	54	17	55	26	45	21	57	35	57	27	53	31	51	28	60	40
17	.....	.....	49	22	55	36	52	37	57	16	52	35	52	29	52	22	48	22	60	44	56	34	62	30	63	36	52	39
18	.....	.....	45	20	50	37	52	40	59	19	52	32	48	28	55	30	43	24	54	42	54	37	51	29	57	38	60	33
19	.....	.....	32	25	42	35	54	41	60	23	50	34	47	31	44	21	31	25	55	42	60	42	60	43	49	36	59	35
20	.....	.....	49	13	48	35	50	42	50	26	50	35	50	31	41	12	38	14	60	45	55	44	50	42	45	34	53	30
21	.....	.....	34	29	38	32	50	33	61	28	46	28	41	29	46	14	38	19	57	40	61	40	54	40	46	37	52	29
22	.....	.....	43	7	45	20	41	24	49	30	28	−5	35	−9	50	16	38	20	49	33	44	23	55	28	49	29	55	33
23	.....	.....	35	8	51	22	45	25	41	−1	33	−6	46	−7	51	16	39	19	52	29	45	19	56	23	54	25	57	35
24	.....	.....	45	12	38	32	45	29	51	9	38	6	50	4	56	17	31	20	47	34	39	23	58	33	47	35	52	32
25	.....	.....	44	19	47	29	47	34	49	22	41	30	42	29	51	16	49	10	55	39	48	34	62	34	54	31	54	33
26	.....	.....	48	19	48	26	47	34	54	15	58	28	41	29	50	17	46	19	59	39	50	35	62	32	57	28	59	29
27	.....	.....	34	25	48	24	48	32	56	12	50	31	43	25	48	14	29	20	58	37	52	27	60	32	54	29	60	33
28	.....	.....	35	8	44	29	44	31	43	8	41	22	43	25	45	12	29	15	58	36	50	35	59	30	48	31	53	33
29	.....	.....	34	19	44	20	44	37	49	14	32	2	37	−2	42	11	28	17	59	29	45	24	59	25	46	22	52	28
30	.....	.....	28	21	44	26	41	28	32	12	35	10	43	5	40	14	28	20	47	34	39	27	49	37	51	27	52	27
Mns.	.....	.....	45.0	21.8	50.5	29.6	53.2	34.1	53.8	17.0	49.9	23.5	47.7	21.9	53.7	25.7	46.2	20.6	61.2	39.2	57.1	32.8	62.4	35.1	56.4	31.9	60.2	35.0

Date.	Arizona.																				Logan, Nev.	
	Douglas.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		Tucson.		Yuma.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	78	31	57	27	70	34	58	26	86	46	83	54	68	32	58	26	78	58	88	55	80	38
2	79	35	53	33	70	39	56	24	88	47	79	52	63	40	50	28	81	50	84	56	67	54
3	78	43	46	26	61	28	48	20	86	42	76	52	57	35	58	30	75	51	83	53	70	44
4	80	30	54	23	68	27	46	22	90	33	79	47	66	22	60	24	80	46	83	56	74	45
5	78	29	60	26	72	30	48	20	92	40	81	47	68	24	65	26	81	43	84	49	75	36
6	82	39	63	23	73	28	48	22	98	40	80	48	68	24	64	23	82	44	84	51	77	37
7	85	38	62	24	78	27	50	24	92	42	82	47	73	29	60	24	84	42	87	48	85	39
8	72	50	57	28	74	29	52	26	94	40	86	56	72	32	66	25	81	49	88	60	83	51
9	78	37	59	23	75	30	52	30	95	52	82	59	71	27	65	24	85	59	91	61	84	43
10	75	51	61	24	72	31	50	30	90	55	85	56	72	32	64	23	77	52	86	61	79	38
11	74	45	46	30	64	43	48	32	88	52	76	61	59	40	56	29	75	54	83	58	85	50
12	74	47	49	41	66	41	50	30	90	35	75	60	60	44	55	39	76	57	78	61	89	48
13	70	54	46	37	60	44	52	31	88	52	70	58	53	41	51	38	69	57	75	56	74	50
14	74	55	48	26	57	40	52	30	90	35	72	52	57	32	52	34	66	56	76	49	70	41
15	75	44	43	25	52	41	56	34	85	40	67	56	54	32	46	32	66	53	69	56	71	38
16	56	52	40	33	60	41	54	33	80	36	63	56	51	42	49	34	64	55	73	52	65	43
17	64	45	51	34	60	39	56	35	72	41	66	53	53	38	54	32	65	49	76	46	71	37
18	65	38	42	38	63	40	56	36	70	36	69	51	52	35	52	39	71	44	72	50	63	43
19	70	45	39	30	55	32	54	36	72	38	63	47	49	32	46	32	65	54	61	46	60	50
20	59	41	34	26	45	31	59	27	70	36	58	47	41	31	38	29	61	41	67	44	56	45
21	66	33	35	26	50	34	48	25	68	34	59	49	45	32	37	30	67	36	69	50	62	41
22	65	48	37	23	60	34	49	23	68	36	68	44	51	27	49	29	63	43	68	51	60	35
23	64	50	38	31	60	37	46	22	64	32	72	52	53	27	48	26	71	51	66	49	67	32
24	65	48	38	29	56	30	43	22	68	40	70	56	53	33	47	29	69	55	74	44	68	43
25	65	49	43	29	60	25	42	23	.....	32	70	49	54	31	49	32	68	41	74	46	68	39
26	64	48	49	24	62	27	40	24	.....	34	70	45	59	24	51	25	57	38	74	44	65	39
27	72	35	48	25	65	28	42	25	.....	36	70	44	59	25	50	24	71	39	74	43	65	35
28	60	37	44	21	54	21	45	26	.....	35	69	45	49	29	43	29	63	38	71	45	63	34
29	62	31	48	16	55	22	40	20	.....	36	67	41	55	20	46	17	67	35	72	41	58	28
30	62	37	36	20	54	28	36	18	75	36	60	43	44	31	48	26	61	41	62	45	54	35
Means	70.4	42.2	47.5	27.4	62.4	32.7	49.2	26.5	•82.4	39.6	72.2	50.9	57.6	31.4	52.6	28.6	71.3	47.7	76.4	50.9	70.3	41.0

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL SUMMARY.

November was an unusually mild month in all parts of the district. Both temperature and precipitation were above normal for the district as a whole. No severe storms occurred, making it a favorable month for all outside work. In the Nevada area the temperature averaged higher than that for November, 1912, but the excess in temperature for the present November has been exceeded many times before. The precipitation, however, has been exceeded but twice since records were kept. In the Utah area the ground was open and plowing continued throughout most of the month in the lower agricultural valleys, though frost stopped this work before the close of the month in the higher valleys. Fall-sown crops advanced steadily; the rains were opportune, and soaked into the ground instead of causing floods; and in general the month was regarded as the most favorable November for many years. Snow fell in the mountains of the Utah area coincident with every rainstorm in the valleys; and at the close of the month the mountain tops and sides carried a good layer, but the foothills and valleys were generally bare.

The average number of clear days for the district was 11, partly cloudy days 8, cloudy days 11, and rainy days 7.

TEMPERATURE.

The mean temperature for the Great Basin was 39.5°, or 1.8° above normal, and 1° higher than the November mean of last year. Excesses in the monthly mean temperature were the rule, the largest being 7°, at Carlin, Nev., whose mean was 41.2°. Deficiencies were reported at a very few stations and were comparatively small. The highest means were reported in west-central and southwestern Nevada, and at sheltered stations in the valleys of the western slope of the Wasatch Mountains. The highest local mean was 49.2°, at Indian Springs, Nev., and the lowest was 30°, at Cokeville, Wyo.

The month began with temperatures above normal over the entire district. This condition continued until the beginning of the last decade of the month, when a cold spell spread over all parts of the district and lasted four or five days. During this period most of the minimum temperatures were recorded. The temperatures during the remainder of the month were seasonable, except the last two days, which were unseasonably cold at places in the Wyoming and Utah areas.

The following were the highest temperatures that occurred in the various areas of the several States of this district: 58° on the 1st at Evanston, Wyo.; 66° on the 1st, at Weston, Idaho; 80° on the 10th, at Fillmore, Utah; 75° on the 1st, at Silver Lake, Oreg.; 82° on the 2d, at Truckee, Cal.; and 83° on the 7th, at Beowawe and Elko, Nev.

The lowest were: 3° on the 23d, at Cokeville, Wyo.; 10° on the 23d, at Paris, Idaho; −10° on the 22d and 23d, at Heber and Beaver, Utah, respectively; 11° on the 3d, and 21st, at Cliff and Silver Lake, Oreg.; 5° on the 23d, at Bridgeport, Cal.; and −5° on the 30th, at Halleck, Nev.

PRECIPITATION.

The precipitation for the district averaged 1.68 inches, or 0.62 inch above normal. This was twice as much as fell in November, 1912. In the valleys nearly all the moisture fell in the form of rain, while on the mountains there was considerable snow down to the 5,000-foot level. The precipitation chart shows a fairly equable distribution, and in almost every case the local amounts were in excess of the normal. The largest local monthly amount was 6.14 inches, at Cathedral Park, Cal., and the least was 0.35 inch, at Wendover, Utah.

The distribution of the rainfall throughout the month was especially favorable for agricultural purposes. There were four quite distinct rainy periods; from the 1st to 5th, 10th to 14th, 19th to 21st, and during the last 6 days of the month.

In the Nevada area the snow line at the end of November extended down to the 5,000-foot level. There were about 6 inches of snow at the 6,000-foot level, and from 9 to 32 inches at 7,000 feet or higher, depending on location. The precipitation for November in the different drainage basins was heavier than during any of the previous years at nearly all stations, and from September 1 to November 30 was heavier than for the same period during the past 3 years in the Truckee, Carson, and Walker basins, but not so heavy as last season in the Humboldt Basin, due to the unusually heavy October snowstorm of 1912.

TABLE 1.—*Climatological data for November, 1913. District No. 10, Great Basin.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Border	Lincoln	6,085	11	32.1	+ 2.8	56	10	11	22†	38	1.90	+ 0.92	0.90	10.0	4	10	5	15	s.	S. W. Condron.
Cokeville	do	6,204	3	30.0	.....	57	1	3	23	38	1.55	.....	0.67	7.0	5	14	3	3	w.	E. J. Tuckett.
Evanston	Uinta	6,860	17	33.4	+ 1.4	58	1†	5	23	37	0.82	− 0.05	0.19	1.5	7	15	8	7	sw.	Frank Tucker.
Idaho.																				
Geneva	Bear Lake	6,171	4	.....	.....	.....	.....	.....	.....	.....	1.85	.....	1.20	10.0	4	17	5	8	.....	F. W. Boehme.
Grace	Bannock	5,400	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Joy.
Paris	Bear Lake	5,946	18	32.8	− 0.7	60	1	10	23	35	1.46	+ 0.27	0.55	4.0	6	11	12	7	w.	John Norton.
Weston	Franklin	4,460	14	38.4	+ 1.8	66	1	13	23	34	2.10	+ 0.66	0.85	T.	9	7	5	18	sw.	Wm. T. Chatterton.
Utah.																				
Alpine	Utah	4,900	14	.....	.....	.....	.....	.....	.....	.....	1.53	+ 0.23	0.50	.....	6	10	3	17	.....	T. F. Carlisle.
Beaver	Beaver	6,000	9	36.6	.....	72	10†	−10	23	61	2.29	.....	0.70	4.5	6	5	18	7	n.	Henry Baker.
Black Rock	Millard	4,872	9	39.6	.....	68	10	9	23	47	0.91	.....	0.81	T.	2	13	3	14	s.	W. D. Livingston.
Brigham City	Boxelder	4,305	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Nephi M. Valentine.
Burrville	Sevier	6,800	2	36.5	.....	66	9	5	23	44	1.37	.....	0.47	.....	6	.....	.....	.....	.....	F. R. Curtis.
Castle Rock	Summit	6,244	8	.....	.....	.....	.....	.....	.....	.....	1.45	.....	0.25	7.0	11	10	7	13	.....	David Moore.
Cedar City	Iron	5,750	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Parley Dalley.
Center	Tooele	4,250	2	38.4	.....	66	1	−4	22	51	2.06	.....	1.20	2.0	6	10	7	13	n.	L. C. Peterson.
Clarkston	Cache	5,930	1	.....	.....	.....	.....	.....	.....	.....	3.15	.....	1.00	.....	7	10	10	10	.....	W. J. Griffiths.
Corinne	Boxelder	4,240	43	39.9	+ 1.6	65	2	17	25	33	1.90	+ 0.87	.....	0	2	13	3	14	.....	A. C. Murphy.
Deseret	Millard	4,541	18	41.0	+ 3.6	71	1	10	23	47	1.44	+ 0.97	0.95	T.	4	14	5	11	s.	S. W. Western.
Elberta	Utah	4,650	11	41.2	+ 2.4	68	1	4	23	37	1.88	+ 1.24	0.90	5.0	10	12	6	12	s.	D. C. Walkey.
Enterprise	Washington	5,750	7	.....	.....	.....	.....	.....	.....	.....	1.96	.....	0.81	T.	8	18	3	9	.....	James E. Hall.
Erekson	Tooele	4,850	1	.....	.....	.....	.....	.....	.....	.....	3.41	.....	1.94	14.5	10	.....	.....	.....	.....	N. W. Erekson.
Farmington	Davis	4,267	12	41.4	+ 0.8	63	10	18	23	26	0.68	− 0.83	0.20	2.0	6	15	11	4	n.	Charles Boylin.
Fillmore	Millard	5,100	21	44.2	+ 2.1	80	10	17	23	45	1.67	+ 0.71	0.83	0	9	.....	.....	.....	.....	J. J. Starley.
Garland	Boxelder	4,248	1	40.8	.....	68	1	19	29	28	2.18	.....	0.76	0.2	8	3	20	7	.....	Heber C. Cutler.
Garrison	Millard	4,850	9	[a]39.6	.....	67	8†	11	21†	43	1.00	.....	0.70	.....	3	[a]6	[a]3	[a]7	n.	E. M. Smith.
Government Creek	Tooele	5,277	12	39.1	+ 0.1	62	1†	6	22	30	2.59	+ 1.51	0.80	10.0	8	10	10	10	s.	Walter James.
Granger	Salt Lake	4,560	1	[b]42.6	.....	66	1†	20	22†	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	Max. Greene.
Grantsville	Tooele	4,220	6	.....	.....	.....	.....	.....	.....	.....	1.53	.....	0.99	2.0	8	9	16	5	nw.	Monto Barrus.
Grouse Creek	Boxelder	5,148	3	.....	.....	.....	.....	.....	.....	.....	1.34	.....	0.44	0.5	7	9	10	11	sw.	Philip Paskett.
Heber	Wasatch	5,593	20	36.4	+ 1.1	64	1†	−10	22	44	1.91	+ 0.55	0.45	7.0	8	11	5	14	s.	John Crook.
Hensfer	Summit	5,301	13	37.3	+ 1.9	66	10	0	22†	45	2.12	+ 0.45	0.41	5.2	15	9	6	15	wnw.	William Brewer.
Hooper	Weber	4,436	2	.....	.....	.....	.....	.....	.....	.....	1.04	.....	0.38	.....	3	.....	.....	.....	.....	T. M. Jones, jr.
Ibapah	Tooele	7,500	8	37.0	.....	67	9	3	23	44	1.11	.....	0.50	.....	7	16	10	4	nw.	W. M. Chastain.
Ibex	Millard	5,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John J. Watson.
Iosepa	Tooele	4,356	2	35.6	.....	58	1	16	22†	25	1.94	.....	0.90	0	4	9	10	11	n.	Geo. K. Hubbell.
Junction	Piute	6,000	1	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.50	T.	3	17	11	2	s.	Joseph Jensen.
Kanosh	Millard	5,250	6	.....	.....	.....	.....	.....	.....	.....	1.76	.....	0.92	0	6	.....	.....	.....	.....	Geo. Crane.
Kelton	Boxelder	4,230	33	38.7	+ 4.3	57	2	20	4†	32	1.62	+ 1.25	0.50	.....	5	3	16	11	sw.	F. W. Klock.
Lemay	do	4,221	2	40.1	.....	60	8	20	21†	29	0.69	.....	0.28	0	4	15	13	2	.....	Agent So. Pac. Co.
Levan	Juab	5,010	23	39.4	+ 2.4	64	10	6	22	34	2.08	+ 1.10	0.50	4.6	8	11	6	13	sw.	Wm. Brown.
Logan	Cache	4,507	22	39.8	+ 1.9	63	1	18	22	24	1.84	+ 0.54	0.47	2.5	7	.....	.....	.....	.....	Utah Exp. Station.
Low	Tooele	4,602	2	45.2	.....	74	8	16	28	39	0.80	.....	0.80	T.	1	15	1	14	.....	Agent W. Pac. Co.
Lucin	Boxelder	4,504	6	37.1	.....	60	2	12	23†	31	0.72	.....	0.45	T.	4	6	18	6	.....	E. C. Puryear.
Manti	Sanpete	5,575	18	39.0	+ 1.7	64	6†	9	22	29	1.43	+ 0.50	0.46	0	8	4	0	26	.....	J. M. Anderson.
Maple Creek	Utah	4,890	2	.....	.....	.....	.....	.....	.....	.....	3.98	.....	1.80	8.3	10	8	10	12	.....	Lewis W. Gillilan.
Marysvale	Piute	6,180	13	37.8	+ 0.6	67	8	4	24	45	0.75	− 0.02	0.45	.....	3	.....	.....	.....	.....	Lafe King.
Meadowville	Rich	6,200	12	34.6	+ 0.8	57	1	10	23	32	1.57	+ 0.35	0.60	4.0	4	15	4	11	.....	J. S. Moffat.
Midlake	Boxelder	4,235	2	44.4	.....	55	1†	31	21	16	0.65	.....	0.40	0	3	14	2	14	e.	Mrs. S. M. Gibson.
Midvale	Salt Lake	4,365	1	43.0	.....	70	1†	12	22	38	0.91	.....	0.20	1.5	11	6	17	7	s.	C. McGhie.
Milford	Beaver	4,962	5	39.6	.....	68	9	12	24	44	.....	.....	.....	.....	.....	20	6	4	sw.	Agent Salt Lake Route.
Mills	Juab	4,911	1	.....	.....	.....	.....	.....	.....	.....	1.48	.....	0.43	.....	9	.....	.....	.....	.....	Geo. McCune.
Millville	Cache	4,848	18	.....	.....	.....	.....	.....	.....	.....	3.20	+ 1.46	0.75	.....	11	4	21	5	n.	Fred Yeates.
Minersville	Beaver	5,070	11	.....	.....	.....	.....	.....	.....	.....	1.89	+ 1.02	0.81	0.5	8	10	9	11	sw.	Fred R. Pryor.
Modena	Iron	5,479	12	39.3	+ 0.3	66	9	15	23	41	1.54	+ 0.94	0.51	T.	10	10	10	10	sw.	U. S. Weather Bureau.
Morgan	Morgan	5,068	8	39.7	.....	66	1†	10	23	43	1.31	.....	0.38	2.0	8	.....	.....	.....	.....	E. O. Kingston.
Moroni	Sanpete	6,000	5	40.8[b]	.....	67	9	12	22	38	1.47	.....	0.60	1.5	7	6	10	14	sw.	B. F. Ellason.
Mosida	Utah	4,510	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. B. Curtis.
Nephi (near)	Juab	5,119	8	.....	.....	.....	.....	.....	.....	.....	1.08	.....	0.28	.....	7	.....	.....	.....	.....	A. D. Ellison.
New Castle	Iron	5,150	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. W. Jones.
Oak City	Millard	4,900	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Nielson.
Ogden	Weber	4,310	42	39.6	+ 0.2	68	13	15	23†	40	2.64	+ 1.48	0.85	T.	6	21	2	7	s.	A. Van de Graaff.
Panguitch	Garfield	6,560	1	35.0	.....	64	6†	8	29	40	1.23	.....	0.34	1.0	6	22	2	6	sw.	Harry L. Strembel.
Park City	Summit	7,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hoyt C. Henriques.
Parowan	Iron	5,970	22	41.0	+ 2.0	66	9	14	22	33	2.15	+ 1.45	1.15	.....	5	9	6	15	.....	Alex. Matheson.
Payson	Utah	4,637	9	.....	.....	.....	.....	.....	.....	.....	3.72	.....	1.20	6.0	10	9	6	15	sw.	D. L. Coombs.
Pelican Point	do	4,600	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. M. Mendenhall.
Pineview	Summit	6,335	0	33.8[f]	.....	68	1	− 1	21†	51	1.10	.....	0.60	.....	2	.....	.....	.....	.....	Granville Deming.
Pinto	Washington	5,907	15	38.0	+ 1.6	66[f]	9	9[f]	23	46[f]	1.61	+ 0.41	0.70	.....	.....	12[b]	1[b]	10[b]	n.	J. H. Harrison.
Promontory	Boxelder	4,913	38	.....	.....	.....	.....	.....	.....	.....	1.70	+ 1.11	1.70	0	1	.....	.....	.....	.....	F. C. Houghton.
Provo	Utah	4,532	19	40.8	+ 1.0	70	10	2	22	41	3.11	+ 2.00	1.12	.....	5	12	10	8	.....	Reclamation Service.
Randolph	Rich	6,442	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William Rex.
Revier	Salt Lake	5,066	2	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.30	0	6	.....	.....	.....	.....	E. L. Terry.
Richfield	Sevier	5,350	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. A. Westman.
Richmond	Cache	4,529	1	.....	.....	.....	.....	.....	.....	.....	2.78	.....	0.74	2.1	13	5	7	18	.....	J. R. Thompson.
Sahara	Iron	5,209	1	40.4	.....	68	9	11	23	45	1.01	.....	0.30	0	9	17	4	9	sw.	Earl Markwith.
Saltair	Salt Lake	4,220	9	43.6	.....	65	11	20	23	19	1.28	.....	0.80	0.5	9	.....	.....	.....	.....	E. J. Bench.
Salt Lake City	do	4,360	39	44.0	+ 3.6	68	10	21	22	31	1.21	− 0.21	0.33	1.5	13	11	9	10	se.	U. S. Weather Bureau.
Scipio	Millard	5,260	18	42.4	+ 5.2	74	10	10	22	52	1.72	+ 0.50	0.41	1.0	9	7	2	21	sw.	Thos. Memmott.
Showell	Boxelder	4,650	1	38.7	.....	63	1	11	27	40	1.81	.....	0.70	.....	4	17	10	3	.....	Richard Ilgner.
Silver City	Juab	6,127	3	.....	.....	.....	.....	.....	.....	.....	1.77	.....	0.96	.....	5	.....	.....	.....	.....	J. L. Stark.
Smyths	Beaver	4,900	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	V. Waddoups.
Soldier Summit	Utah	7,454	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. A. Boyd.
Spanish Fork	do	4,585	4	43.8	.....	71	9	11	22†	31	3.08	.....	0.80	8.5	9	15	4	11	.....	Reclamation Service.
Springvale	Juab	5,000	1	39.0	.....	69	10	8	22	49	0.93	.....	0.36	0	7	16	4	10	.....	Jas. Coleman.
Tooele	Tooele	4,900	17	41.2	+ 1.3	69	10	18	23	38	1.87	+ 0.36	1.40	.....	5	8	5	17	s.	E. A. Bonelli.
Utah Lake P. S	Utah	4,500	5	35.5[a]	.....	58	6	5	22	33	1.45	.....	0.43	5.0	7	.....	.....	.....	.....	W. A. Knight.
Vernon	Tooele	5,500	2	.....	.....	.....	.....	.....	.....	.....	3.00	.....	1.10	11.5	8	10	12	8	sw.	Glynn Bennion.
Wendover	do	4,237	1	37.5	.....	64	1	9	23	37	0.35	.....	0.33	0	2	.....	.....	.....	.....	J. S. Cooper.
Whiskey Creek	Millard	4,850	2	.....	.....	.....	.....	.....	.....	.....	1.82	.....	0.80	.....	3	.....	.....	.....	.....	Geo. Stevens.
Winder	Garfield	8,000	1	.....	.....	.....	.....	.....	.....	.....	1.87	.....	0.80	0	5	.....	.....	.....	.....	Rollo Adair.
Woodruff	Rich	6,500	10	32.6[a]	+ 1.9	58	10	5	23	40	0.82	+ 0.54	0.45	.....	6	13	7	10	.....	O. J. Call.

TABLE 1.—*Climatological data for November, 1913. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																				
Burns	Harney	4,157	22																	
Cliff	Lake	4,300	6	39.5		68	7	11	3†	47	1.40		0.35	2.0	10	1	13	16	n.	John C. Green.
Paisley	do	4,500	10	44.8°		67°	1†	19°	14	44°	1.38°		0.32°	2.0°	8°	4°	12°	9°	sw.	S. F. Woodward.
Silver Lake	do	4,700	16	38.7	+ 1.9	75	1†	11	21	55	1.40	+ 0.40	0.27	T.	9	3	22	5	sw.	G. W. Marvin.
California.																				
Bridgeport	Mono	6,500	0	39.4		67	8	5	23	50	0.91		0.32	7.0	8	16	11	3	s.	A. F. Scott.
Cathedral Park	Eldorado	6,400	0	39.6		64	10	17	21†	27	6.14		1.30	17.0	12	7	7	16	s.	Carl Fluegge.
Tahoe	Placer	6,240	2	36.0		62	1	9	23	36	4.05		0.84	18.0	10	7	0	23	w.	R. M. Watson.
Truckee	Nevada	5,819	41	46.6	+10.1	82	2	14	22	42	2.51	+ 0.15	0.40	19.0	12	10	4	16		Southern Pacific Co.
Nevada.																				
Austin	Lander	6,594	24																	F. O. Booe.
Battle Mountain	do	4,843	42	40.1	+ 1.4	76	9†	7	22	50	0.95	+ 0.39	0.30	3.5	4	13	7	10		Southern Pacific Co.
Beowawe	Eureka	4,905	42	39.2	+ 2.3	83	7	12	23	53	1.18	+ 0.55	0.35	3.0	4	12	8	10		Do.
Carlin	Elko	5,232	42	41.2	+ 7.0	75	7†	10	23	45	2.02	+ 1.50	0.33	2.0	9	7	18	5		Do.
Cherry Creek	White Pine	6,450	5	37.6		65	9	8	22	37	0.70		0.20	1.5	8	9	9	12	w.	J. H. Leishman.
Clover Valley	Elko	6,000	12																	I. F. Wiseman.
Columbia	Esmeralda	5,750	6	41.4		71	8	15	22	35	0.83		0.38	0.4	7	14	10	6	se.	A. Booth.
Dry Farm	Elko	5,600	1	38.8		64	9	12	22	33	2.19		0.75	4.0	9					Walfrid Sohlman.
East Rochester	Humboldt	7,500	0	37.7		66	8	14	21	20	2.07		0.80	20.5	5	14	0	16	w.	E. B. Mills.
Elko	Elko	5,432	42	39.8	+ 6.0	83	7	11	22	51	1.67	+ 1.00	0.50	2.5	10	8	15	7	nw.	Western Pacific Co.
Eureka	Eureka	6,500	15	38.8	− 0.8	67	8	9	22	36	1.14	+ 0.40	0.35	10.0	7	9	5	16	s.	Clay Simms.
Fallon	Churchill	3,965	19	41.4	+ 1.7	73	9	15	23	43	1.14	+ 0.87	0.60	1.0	7	10	6	14	ne.	U. S. Experiment Station.
Fernley	Lyon	4,200	40	40.8	+ 1.3	72	9	9	23	44	1.71	+ 1.37	0.96	0.5	6	14	3	13		Mrs. G. A. Steele.
Gardnerville	Douglas	4,830	22	41.4	− 1.3	71	9	15	24	43	1.38	− 0.36	0.56	2.4	9	12	6	12	w.	Forest Service.
Gerlach	Washoe	3,931	0	47.0		78a	22	20	24	52a	1.05		0.30	0.2	7	10	0	20	w.	Western Pacific Co.
Geyser	Lincoln	6,055	9																	Mrs. J. F. Wambolt.
Glenbrook	Douglas	6,240	4	39.4		74	2	18	22	48	1.29		0.75	7.3	7	11	6	13	w.	C. C. Henningsen.
Golconda	Humboldt	4,697	34	40.8	+ 0.3	66	3	18	21†	36	0.63	+ 0.24	0.18	0	8	4	11	15	w.	Southern Pacific Co.
Halleck	Elko	5,631	20	37.4	+ 4.8	80	8	− 5	30	49	1.35	+ 0.83	0.75	3.0	5	16	5	9		Do.
Indian Springs	Clark	3,136	0	49.2		71	8†	29	23†	32	1.50		0.64	0	4	23	1	6	n.	Ira McFarland.
Jean	do	2,074	5																	Salt Lake Route.
Lahontan	Churchill	4,200	1	42.3		74	9	21	21†	32	1.44		0.88	0.2	5	14	9	7	w.	U. S. Reclamation Service.
Lewers Ranch	Washoe	5,500	25	41.7	−1.9	70	9	15	22	36	3.33	+ 0.15	0.80	2.0	7	9	6	15		Ross Lewers.
Lida	Esmeralda	6,037	0	38.4a		66a	7	19a	23†	32	1.78		0.73	6.3	4	16	5	9	nw.	L. F. Detwiler.
Lovelocks	Humboldt	3,977	19																	A. P. Tilford.
McDermit	do	4,700	23	38.7	+ 1.2	67	9	13	22	34	1.41	+ 0.54	0.44	1.5	11	11	9	10	w.	F. M. Bullock.
McGill	White Pine	6,338	22	38.2	+ 4.1	69	9	0	23	51	1.01	+ 0.18	0.28	3.8	8	11	6	13	s.	R. E. Middagh.
Millett	Nye	6,002	5	38.7		69	6†	7	22	46	0.43		0.40	0	2	13	5	12	s.	Fred J. Jones.
Mina	Mineral	4,600	6	44.4	+ 0.7	72	7†	11	22†	41	0.27	+ 0.04	0.22	0	2	14	5	11	s.	Southern Pacific Co.
Oasis Ranch	Esmeralda	5,106	0	43.4		71	7†	15	23	47	1.65		0.60	6.0	5	18	6	6		A. S. Patterson.
Potts	Nye	6,990	20	34.3	− 0.5	63	8	5	22†	43	0.06	+ 0.39	0.04	0.7	2	9	0	21	s.	Miss Maude Potts.
Quinn River Ranch	Humboldt	4,850	11	38.7	+ 1.4	72	8	9	23†	47	0.86	+ 0.35	0.37	0	6	14	1	15	s.	F. M. Payne.
Rebel Creek	do		1																	E. J. Hyatt.
Reno	Washoe	4,532	42	42.0	+ 1.0	73	9	20	22	38	1.51	+ 0.42	0.51	0.3	10	10	6	14	w.	U. S. Weather Bureau.
Sand Pass	do	4,198	0								1.48		0.75	T.	7	8	9	13	w.	Western Pacific Co.
Soda Lake	Churchill	4,534	6			70	9				1.10		0.57	1.0	5	8	9	13	sw.	U. S. Reclamation Service.
Tecoma	Elko	4,812	35	38.4	+ 4.4	71	4†	− 2	23	65	0.89	+ 0.49	0.57		6	9	8	13		Southern Pacific Co.
Tonopah	Nye	6,090	8	40.3		65	8	18	22	22	0.80		0.45	3.0	6	10	14	6	se.	U. S. Weather Bureau.
Wells	Elko	5,631	41	35.2	+ 1.6	65	7†	0	16	55	1.50	+ 1.06		2.0	7	6	14	10		Southern Pacific Co.
Winnemucca	Humboldt	4,432	34	38.9	+ 1.4	70	9	15	22	39	1.37	+ 0.63	0.32	1.7	10	12	8	10	ne.	U. S. Weather Bureau.
Yerington	Lyon	4,375	0	39.8		72	9	13	24	43	1.30		0.63	0.6	9	13	7	10	sw.	High School.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 10, Great Basin.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wyoming.																																
Border	Bear						.65				T.	.90	.20	T.	T.						.15	T.								T.	1.90
Cokeville	do		.10				.25					T.	.67	.10	T.					T.		T.				T.			.43	1.55
Evanston	do		T.	.11			.14					.12	.06	T.	T.						.19	T.				T.			.09	.11	0.82
Idaho.																																
Geneva	Bear						1.20							.40															.15	.10		1.85
Grace	do																															
Paris	do		.10	.15			.55					.50	.09								.07										1.46
Weston	do		.41	.15			.22						.85	.22							.18			T.		.03	.02	.02			2.10
Utah.																																
Alpine	Gt. Salt Lake		.50	.18										.25								.45			.10			.05			1.53
Beaver	Sevier Lake		.68	.17									.70	.16							.13	.45				T.					2.29
Black Rock	do		.10									T.		.81								T.									0.91
Brigham City	Gt. Salt Lake																															
Burrville	Sevier Lake		.30	.47	.14												.05	.40											.01		1.37
Castle Rock	Gt. Salt Lake		.05	.15			.25	.10				.15	.15	.05							.15	.20							.15		.05	1.45
Cedar City	Desert																															
Center	do		1.00	.20									.20								.10	.20							.36	T.	T.	2.06
Clarkston	Gt. Salt Lake		.40	.40		1.00			.60	.40												.15	.20									3.15
Corinne	do													*	1.90													T.			1.90
Deseret	Sevier Lake		.30	.95										.09						T.	.10	T.						T.			1.44
Elberta	Gt. Salt Lake		.12	.43								.02	.06	.25	.01						.06	.90							.02		.01	1.88
Enterprise	Desert		.20	.24								.10	.81	.26					.09		.14					.12						1.96
Erekson	do		*	1.94				T.					.10	.33	.09						.37	.24				.05		.04			.25	3.41
Farmington	Gt. Salt Lake		.05				.06							.15	T.						.10	.20					.12			T.	T.	0.68
Fillmore	Sevier Lake		.22	.83								T.	.06	.29						.01	.02	.03				T.		.19		.02	1.67
Garland	Gt. Salt Lake		.76		.25					.26			.23	.25							.13				14			.16			2.18
Garrison	Desert		.25	T.									T.	.70			T.			T.			T.							.05	1.00
Government Creek	do	1.00	.28	.75										.36	.02					T.	.10	.80				T.		T.	.16		.12	2.59
Granger	Gt. Salt Lake																															
Grantsville	do			.99			.03							.21	.02						.10	.15			.02				.01			1.53
Grouse Creek	Desert		.18				.28					.08	.44	.20							.10	T.						.06		T.		1.34
Heber	Gt. Salt Lake		*	.45			.04					.25	.35	.30							.12	.35				T.				T.	.05	1.91
Henefer	do		.03	.32			.41	.30				T.	.01	.02	.12					T.	.25	.27	.09			.03			.25		.02	2.12
Hooper	do		.30			.36							.38																		1.04
Ibapah	Desert		.50	.03									.02	.18								.18						.10			.10	1.11
Ibex	do																															
Iosepa	do		.90											.50	.04					T.	T.	T.							.50		T.	1.94
Junction	Sevier Lake		.40	.20								T.	T.	.50								T.						T.			1.10
Kanosh	do		.04	.92									.02	.19							.13								.46			1.76
Kelton	Gt. Salt Lake		.20	.35			.12						.50			.45														T.		1.62
Lemay	Desert											.10	.28	.26						.05												0.69
Levan	Sevier Lake		.24	.48								.42	.19	.18	T.					T.	*	.50				.01			.06			2.08
Logan	Gt. Salt Lake	.30										.45		.47	.02						.28							.25			.07	1.84
Low	Desert		.80																		T.					T.					T.	0.80
Lucin	do		.08			T.		T.				.45		.18							.01							T.				0.72
Manti	Sevier Lake		.14	.22								.04	.06	.46							.22	.21							.08			1.43
Maple Creek	Gt. Salt Lake		.43	.42								.10	.02	.35	.12						.18	1.80				.04			.52		T.	3.98
Marion	do																															
Marysvale	Sevier Lake													.45							.20							.10				0.75
Meadowville	Gt. Salt Lake		T.	.35				.60						*	.60						*	.02									T.	1.57
Midlake	do		T.	.40			.05							.20							T.											0.65
Midvale	do	.08	.15								T.	.08	.01	.02						.01	.19	.03			.11			.20			.03	0.91
Milford	Sevier Lake																															
Millville	Gt. Salt Lake		.40				.33	.33				.05	.41	.75	.49						.20	.20				T.		.01			.03	3.20
Mills	Sevier Lake		T.	.43	.11							.13	.07	.26							.01	.28				.10			.09			1.48
Minersville	do		.81										.21	.57	.03					.01	.03	.22									.01	1.89
Modena	Desert		.51	T.								.34	.14	.31	.03				T.	.05	.03	.10			T.	.02		.01			T.	1.54
Morgan	Gt. Salt Lake						.38	.21				.02		.02	.03						.32	.18							.15			1.31
Moroni	Sevier Lake		.08	.22								.08	*	*	.60	.01						.40				T.	T.		.08			1.47
Mosida	Gt. Salt Lake																															
Nephi (near)	do							.08					.12		.28						.15			.17			.18		.10			1.08
New Castle	Desert																															
Oak City	Sevier Lake																															
Ogden	Gt. Salt Lake		.34				.35						T.		.85							.55				.10		.45				2.64
Panguitch	Sevier Lake		.07	.15							.15	.22	.34	.30			T.															1.23
Park City	Gt. Salt Lake																															
Park Valley	Desert																															
Parowan	do			.78										1.15	.05						.05	.12							T.		*	2.15
Payson	Gt. Salt Lake		.30	.50								.30	.20	.32	.10						.30	1.20							.40		.10	3.72
Pelican Point	do																															
Pineview	do			.50																		.60										1.10
Pinto	Desert		*	.52								*	*	.27	.70				*	*	*	.12									*	1.61
Promontory	Gt. Salt Lake		1.70																													1.70
Provo	do			.70								.50	.54								*	1.12						.25				3.11
Randolph	do																															
Revier	do		.30			T.	.07						.04								.27			T.		.02			.10	T.		0.80
Richfield	Sevier Lake																															
Richmond	Gt. Salt Lake	.04	.28			.39	.15					.74	.02	.14					.04		.48				.24	.04		.16			.06	2.78
Sahara	Desert		.23	.11								.03	.17	.30	.03					T.	.03	.04				.07						1.01
Saltair	Gt. Salt Lake			.80			.03	.02				T.		.12	.01	.04					.04	.05							.17			1.28
Salt Lake City	do		.23	.11		T.	.04	.01				.01	.02	.09	T.						.24	.10				.01		.28	.01		.06	1.21
Scipio	Desert		.32	.18								.10	.02	.37	.05						.24	.41	.03					T.			T.	1.72
Showell	do		.50				.29						.70	.32																		1.81
Silver City	do		.25	.25																	.96	.29				.02				T.	T.	1.77
Smyths	do																															
Spanish Fork	Gt. Salt Lake		.18	.72							.01		.26	.25	.03						.15	.80							.68			3.08
Springvale	Sevier Lake		.09	.36								.05	.11									.19	.06					.07				0.93
Strawberry Tunnel	Gt. Salt Lake																															
Thistle	do																															
Tooele	do			1.40			T.							T.	.01						T.	.25				T.		.01	.20			1.87
Utah Lake Pumping Station	do		.23	.31					T.			.12								T.		.43		T.	.11			.23	T.		.02	1.45
Vernon	Desert		.50	1.10			T.						T.	.46	.06						.28	.46				.12	T.	T.	.02			3.00
Wendover	do		.02												.33																	0.35
Whiskey Creek	do			.80										.80							.22											1.82
Winder	Sevier Lake		.34	.41								.24		.80										.08								1.87
Woodruff	Gt. Salt Lake		.10				.12					.01	.13	.45	.01						T.					T.	T.				T.	0.82

TABLE 2.—*Daily precipitation for November, 1913. District No. 10*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon.																																
Ana River	SE. Drainage	.05				.10	.32												.01	.01								.02				0.51
Bear Valley	do	.18				.73	.07	.09			.20								.10		.45	.12	.07			.06			.18			2.25
Burns	do																															
Burns Mill	do																															
Christmas Lake	do																															
Cliff	do	.23	.05				.35	.06		.11			.33							.10	.09	.03							.05			1.40
Diamond	do	.30	T.	T.		.25	.12		T.		.12		.08						.07		.15					T.		T.	T.			1.09
Embody	do	.08	.06	.02	.10	1.80	.88	.05		.12	.03		.19						.10	.20									.05	.10		3.78
Fort Rock	do	.11			T.	.55	.10			T.	.20		.28				T.	.05	T.	T.	.07					T.	T.		T.	T.		1.36
Paisley	do	.18	.32			.14	.15				.15	T.	.16						.04	.04	.20											1.38
Riley	do																															
Seneca	do	.31						.66	.22			.18							.12					.18	.07			.12			.21		2.07
Silver Lake	do	.26				.25	.24	.06	.18				.27						.03	.02	.09											1.40
Valley Falls	do																															
California.																																
Bijou	Truckee				.02				T.			.82		.10	.38				.26							.08		.30		.06		2.02
Boca	do										.05	.50	.10						.20	.10	.10				.10		.10	.05	.05	.05	.10	1.50
Bridgeport	East Walker		.05	.01		.08						.10	T.	.20	.05				T.	.32								.10		T.	T.	0.91
Cathedral Park	Truckee	.60			.50	.30					.01	1.30		.10					.60		.30				30	1.80	.03			.30		6.14
Deer Park	do										.50	.20	.20	.20						.40	.50	.20			.40		.60			.20	.20	3.60
Hobart Mills	do	.09	.10		.20	.13	.06					1.03	.15	.22	.03				.06	.07	.11	.05				.25	.03	.51		.11	.01	3.21
Lundy	East Walker												*	.70					*	.98									*	*	.35	2.03
McKinney	Truckee																															
Markleeville	East Carson	T.			.14	T.					.08	.30	.20	.07					.70									.32			.40	2.21
Shields Ranch	East Walker				.08						T.	.34		.32	.05				.08	.68								T.			.23	1.73
Silver Creek	East Carson	T.			.14	.01					.12	.70	.43	.07					.70									.32			.54	3.03
Tahoe	Truckee			.20	.27							.84	.19	.16							.55		.27			.15	.72			.70		4.05
Tallac	do	T.			.20	T.					.40	.35	T.	.15	T.				.10	.45	T.				T.	T.	T.	.15		.50	T.	2.30
Truckee	do	.02			.12	.05					.30		.30	.12					.30		.30				.30	.10	.20			.40		2.51
Woodfords	West Carson				T.					.09	.14	.35	.20	.06	T.									T.				.28			.05	1.17
Nevada.																																
Arthur	Humboldt		.30			T.						.10	.60	.40						.20	.30		.10						T.			2.00
Austin	Reese																															
Battle Mountain	Humboldt	T.	T.								.25		.30						T.		.05									.30		0.95
Beowawe	do		.25									.28		.35																.30		1.18
Carlin	do					.33					.20	.32	.26	.32					.15	.17	.07									.20		2.02
Cherry Creek	do		.18	.02										.20	.02						.12	.01						.08			.07	0.70
Clover Valley	do																															
Columbia	Desert		.11										.01	.38	.02	.01				.22											.08	0.83
Dry Farm	Humboldt		.40				.10					.24	.75	.21							.32							.02	.04		.11	2.19
East Rochester	do				.75							T.		.80	.15				T.		.27	T.						T.		.10		2.07
Elko	do		.22			.09	T.					.17	.26	.50	.02						.16	.03					.02			.20		1.67
Eureka	do	.18	.35			T.								.35							.04	.10								.10	.12	1.14
Fallon	Carson	T.	.13		T.									.60	.07				.10	.04	T.	.04								.16		1.14
Fernley	Truckee	T.	.15		T.							.08	.96						.20	.23		T.								.09		1.71
Gardnerville	Carson				.07							.03	.01	.22	.25				*	.56								.29		T.	.04	1.38
Gerlach	Desert	.30	T.		.05			.08			.30	T.			.20						.02							.10				1.05
Geyser	Humboldt																															
Glenbrook	Truckee				.05							.75	.25	T.					.10		.05				T.			.05		.04		1.29
Golconda	Humboldt		.12		.02		.01					.15		.04					.18									.01		.10		0.63
Halleck	do		.05									T.	*	.75							.05								.50			1.35
Hylton	do	*	.43			*	.10							.22						T.											.40	1.15
Indian Spring	Desert		.50											.31						.64	.05											1.50
Jean	do																															
Lahontan	Carson	.11			.18							T.	.88	.06					.19		.02								T.			1.44
Lewers Ranch	Truckee	.30				.15						.75		.53				T.	.80								.60			T.	.20	3.33
Lida	Desert													.73					*	.44											.61	1.78
Lovelocks	Humboldt																															
McDermit	do	.20	.25		.07	.05	.03				.02	.22	.02	.02					T.		.44	T.				T.		T.		.09		1.41
McGill	do		.14	.07									T.	.28	.08						.06	.28								.03	.07	1.01
Metropolis	do	T.	.11		.10	.02						.48	.56	.27						.02	T.		T.				T.	.05		T.	.10	1.71
Millett	Reese											T.		.40							.03											0.43
Mina	Desert													.22						.05												0.27
North Fork	Humboldt		.03			.50					.25	.18		.35							.06	.02						.03	T.	.12		1.54
Oasis Ranch	Desert		.03											*	.47	T.				.55											.60	1.65
Potts	Reese													.02	T.	T.					T.										.04	0.06
Quinn River Ranch	Quinn	.28	.02		.05	.05								.37							.09											0.86
Rebel Creek	do																															
Reno	Truckee	.19			.01						.10	.43	.27	.18	T.				.26	.04	T.							.01		.02		1.51
Rose Creek	Humboldt	.26			.16						.26	.18		.22					.26		.10							.16		.25		1.85
Sand Pass	Desert	.45	.03		.02	T.						.16	T.	.75	T.				.03		T.				T.					.04		1.48
Smith	West Walker	.08		.08								.06		.20	T.				.55											.10	T.	1.07
Soda Lake	Carson	T.	.17		.08	T.						T.	T.	.57	T.					.18		T.								.10		1.10
Spooners Ranch	Truckee																															
Tecoma	Humboldt		.03				.01					*	.57	.18							.10											0.89
Tonopah	Desert		.03										.40	.05						.12										.10	.10	0.80
Wells	Humboldt																															1.50
Winnemucca	do	.26	.05		.04	.01	T.				T.	.25	.03	.20	T.				T.	.01	.31							T.		.21		1.37
Yerington	Walker	.02	.07		.06	.02								T.	.63				.15	.18								.01		.16		1.30

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 10, Great Basin.*

Date.	Wyoming.				Weston, Idaho.		Utah.																	
	Border.		Evanston.				Corinne.		Deseret.		Fillmore.		Government Creek.		Meadowville.		Modena.		Ogden.		Parowan.		Provo.		Salt Lake City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	55	23	58	29	66	32	62	35	71	25	74	39	62	37	57	30	62	29	57	24	64	32	68	32	67	44
2	50	24	48	32	49	38	65	32	54	43	54	36	53	39	53	34	48	36	55	23	56	41	64	30	57	38
3	49	29	40	25	56	34	58	28	53	35	53	33	39	32	43	27	46	34	56	24	41	31	60	30	48	37
4	43	15	48	22	53	26	55	25	55	25	64	30	52	31	45	23	55	27	58	25	56	27	61	31	54	35
5	53	21	51	24	58	30	55	35	62	37	66	36	54	88	54	27	56	31	61	27	57	31	62	28	60	43
6	50	32	46	34	50	40	50	32	69	42	71	38	62	42	45	35	63	37	63	29	62	34	65	49	62	44
7	46	30	48	28	49	34	54	40	62	29	69	33	54	31	42	32	60	31	66	31	62	32	59	36	56	40
8	48	24	56	21	51	25	58	35	63	27	66	31	55	31	49	25	59	32	65	29	61	31	61	31	56	38
9	48	20	61	24	59	26	55	28	64	24	69	31	59	33	50	33	66	25	63	28	66	33	63	27	58	37
10	56	18	58	22	57	27	46	23	68	25	80	35	62	34	56	24	64	28	64	30	65	33	70	29	68	37
11	50	28	52	28	55	38	58	28	66	42	65	36	60	43	54	28	55	43	66	28	60	46	61	38	61	42
12	40	20	44	29	50	35	50	25	62	39	60	37	55	31	52	26	54	37	64	27	55	34	58	35	57	38
13	40	30	41	28	38	28	45	28	54	40	54	40	47	38	50	24	48	33	68	28	56	41	58	36	51	40
14	49	18	40	29	48	33	48	23	55	33	56	33	47	33	54	24	46	32	67	27	47	27	53	37	48	37
15	44	20	41	24	48	24	52	28	52	21	55	27	46	26	42	27	48	29	57	29	49	28	51	31	50	35
16	44	18	49	18	50	23	48	25	54	18	57	25	46	25	42	21	45	23	55	24	47	25	52	25	54	33
17	40	14	47	20	49	23	49	25	58	22	59	28	51	30	43	21	53	25	54	27	54	27	58	25	56	36
18	41	29	44	26	49	32	50	28	49	37	47	37	48	36	48	30	43	38	52	34	42	35	55	34	54	38
19	47	32	47	29	54	39	57	34	49	36	54	34	49	34	48	34	47	38	56	38	50	33	52	36	57	45
20	38	15	44	22	45	32	55	30	46	25	49	39	43	35	42	16	40	35	49	38	44	34	49	34	47	33
21	31	16	32	16	34	24	50	28	41	28	44	32	36	27	36	12	43	24	46	32	40	27	44	17	36	28
22	32	11	27	7	39	14	53	23	40	11	44	19	36	6	34	11	37	18	41	20	38	14	33	2	39	21
23	41	14	40	5	40	13	48	22	42	10	45	17	35	10	36	10	38	15	42	15	42	35	27	4	41	22
24	46	14	45	13	47	18	45	25	50	16	55	23	41	14	40	16	46	24	43	16	42	28	44	13	47	27
25	42	22	41	26	57	29	50	17	51	33	47	36	47	30	44	25	45	29	46	17	49	30	53	28	52	39
26	38	21	42	21	49	29	48	23	55	27	56	34	49	32	42	26	47	24	45	18	50	32	53	36	55	39
27	40	19	45	22	48	31	45	22	52	28	60	33	45	31	44	25	46	29	40	18	51	28	53	.....	52	35
28	37	19	36	23	42	21	42	21	44	25	45	24	39	19	36	25	40	21	39	16	49	29	44	31	41	30
29	35	11	34	6	36	20	40	25	39	14	44	25	43	21	39	18	45	19	42	15	40	28	45	23	44	28
30	34	12	29	16	35	21	38	20	37	27	43	26	37	26	32	11	36	28	42	19	38	19	44	21	38	31
Mns.	43.6	20.6	44.5	22.3	48.7	28.0	51.0	27.0	53.9	28.1	56.8	31.6	48.4	29.8	45.1	24.0	49.4	29.1	54.1	25.2	51.1	30.8	54.0	27.6	52.2	35.7

Date.	Burns, Oreg.		Nevada.																							
			Cherry Creek.		Elko.		Eureka.		Fallon.		Gerlach.		Las Vegas.		McDermit.		Millett.		Mina.		Reno.		Tecoma.		Tonopah.		Winnemucca.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	48	16	60	32	64	29	59	36	61	40	52	44	79	42	52	38	60	28	61	39	55	44	70	20	57	44	57	35
2	56	26	47	37	58	23	45	32	59	42	51	43	68	43	49	40	56	36	58	43	60	36	70	18	51	37	54	30
3	62	30	40	25	60	20	59	20	54	24	50	42	70	43	49	25	52	18	59	29	58	29	70	22	47	30	52	23
4	64	33	52	20	55	22	52	30	50	21	52	42	68	31	43	28	37	10	59	33	46	29	71	6	50	33	42	25
5	67	38	55	30	55	25	56	35	61	27	50	40	71	36	45	34	64	24	64	34	56	34	70	10	57	35	53	31
6	70	36	60	45	60	38	60	40	70	45	52	42	74	40	51	43	69	44	71	35	64	41	71	22	61	42	63	45
7	68	34	58	32	83	32	65	31	65	30	50	40	78	41	63	37	67	24	72	32	68	35	70	15	62	44	65	32
8	66	32	57	26	63	28	47	34	68	28	52	42	80	41	66	32	67	23	72	39	72	36	69	10	65	46	67	36
9	65	30	65	28	60	29	46	34	73	30	52	42	81	42	67	40	69	23	71	39	73	35	68	9	65	46	70	31
10	64	28	60	32	64	24	59	42	61	42	52	40	79	44	57	46	65	35	70	42	62	39	68	10	61	45	64	40
11	68	24	57	45	59	24	60	40	57	32	51	39	79	56	48	36	61	44	68	45	53	36	68	10	56	43	47	36
12	70	20	50	32	49	35	55	25	56	30	52	38	76	44	52	34	56	27	62	25	50	35	67	15	50	33	54	37
13	64	22	42	30	49	35	46	32	50	38	54	42	69	47	47	34	50	30	55	31	43	34	68	12	40	34	40	35
14	62	23	45	30	48	30	45	28	49	34	62	38	69	37	50	29	49	30	52	33	45	35	66	17	41	31	48	30
15	60	20	45	23	49	25	50	24	52	25	58	40	71	42	48	26	49	24	55	26	52	29	65	11	43	29	52	24
16	61	21	47	20	48	26	50	20	52	26	52	33	72	39	52	27	51	16	56	25	55	24	65	10	48	29	54	24
17	63	15	50	29	47	25	48	31	53	27	48	33	70	37	45	29	54	20	55	32	60	33	65	10	46	32	42	28
18	60	17	46	39	50	32	44	35	49	28	46	34	61	46	47	30	47	40	55	40	52	33	66	19	40	35	48	28
19	54	32	47	28	53	25	48	35	50	34	59	48	53	46	48	26	48	25	51	38	48	34	67	12	40	31	48	26
20	49	23	43	33	54	32	40	32	52	37	70	48	56	44	44	30	43	26	58	34	46	34	65	17	44	32	42	29
21	46	20	33	22	54	20	39	18	42	22	72	42	63	42	35	17	48	25	48	23	43	23	64	11	34	22	37	18
22	44	10	34	8	38	11	44	9	44	17	78	34	59	36	38	13	43	7	46	11	47	20	60	0	34	18	43	15
23	45	12	38	10	38	13	48	12	42	15	.....	22	65	32	44	17	47	10	52	11	48	20	60	−2	46	30	46	16
24	46	15	49	18	48	14	50	23	46	16	72	20	63	39	48	21	53	14	54	24	47	20	61	0	48	35	50	17
25	52	22	49	35	53	34	48	33	57	28	66	23	65	38	45	27	50	33	52	31	52	35	60	5	40	32	51	28
26	50	20	46	25	55	32	46	28	52	27	64	29	65	38	49	29	45	20	51	37	49	31	62	12	41	34	51	28
27	51	19	46	30	58	30	50	33	53	35	64	29	64	37	42	30	54	34	58	31	48	28	62	10	46	27	47	23
28	50	20	37	15	50	18	43	13	47	19	66	27	63	41	40	17	42	9	48	20	44	23	60	3	38	23	44	17
29	48	15	40	20	38	25	40	25	43	30	64	25	59	31	38	31	49	12	50	35	45	31	62	6	49	26	36	30
30	46	12	36	24	48	26	34	21	36	26	64	28	50	30	35	19	41	24	39	28	38	26	60	10	27	20	36	16
Mns.	52.5	22.9	47.8	27.4	53.6	26.1	49.2	28.4	53.5	29.2	57.8	36.3	68.0	40.2	47.9	29.5	52.9	24.5	57.4	31.5	52.6	31.4	65.7	11.0	47.3	33.3	50.1	27.8

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning: the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 11, CALIFORNIA.

Local Forecaster G. H. WILLSON, District Editor.

GENERAL SUMMARY.

November, 1913, was generally cloudy and unsettled in the northern portion of the State, with frequent rains, but in the south there were many clear days and the usual amount of sunshine. Frosts occurred quite generally from the 22d to 24th, and on the 30th, but no material damage was reported. High seas caused considerable damage along the central and northern coast on the 26th, destroying an iron pier near the Golden Gate, about 700 feet of railroad track along the beach near the entrance to Humboldt Bay, and the wharf at Capitola. Shipping was also delayed on account of the rough bars at San Francisco and Humboldt Bays. There were no high winds at the time, nor had there been, and the rough seas were probably caused by a disturbance far out in the Pacific.

The mean temperature for the State was slightly below the normal, although very warm weather occurred in the southern coast valleys and southern interior portions on the 7th and 8th, and many stations reported maximum temperatures of 90° and over. In the Sacramento and San Joaquin Valleys maximum temperatures seldom reached 80°.

The most important feature of the month was the generous precipitation over the entire State—rain in the valleys and foothills, and rain, followed by heavy snow, in the mountains. In the northern portion the rain continued with short intervals during the entire month, but in the south there were not so many rainy days, although the amounts for the month were proportionally as large. The average precipitation for the month for the State was more than twice the normal amount, and coming after two years of light rainfall did much to allay the fear of a third dry year. The ground was so thoroughly dry from the scanty precipitation of the past two seasons that the rivers responded but slightly to the heavy fall.

The snowfall in the mountains was the heaviest recorded for November for some years, and a heavy cover of well-packed snow remained at the higher levels at the close of the month. The following are some of the larger amounts: Fordyce Dam, 85.5 inches; Tamarack, 63; Summit, 62.5; Table Rock, 50; and Bowman's Dam, 36.

TEMPERATURE.

The mean temperature for the State was 0.7° below the normal. The following table gives the means and departures for each November from 1897 to 1913, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897	50.8	−2.1	1906	52.6	−0.3
1898	51.6	−1.3	1907	52.7	−0.2
1899	52.1	−0.8	1908	52.9	0.0
1900	54.7	+1.8	1909	50.7	−2.2
1901	54.9	+2.0	1910	52.8	−0.1
1902	50.8	−2.1	1911	51.1	−1.8
1903	55.2	+2.3	1912	52.2	−0.7
1904	53.4	+0.5	1913	52.2	−0.7
1905	52.8	−0.1			

The following table gives the average precipitation for the State and departure from the normal for each November from 1897 to 1913, inclusive:

Year.	Average.	Departure.	Year.	Average.	Departure.
	Inches.	Inches.		Inches.	Inches.
1897	1.41	−1.40	1906	1.92	−0.89
1898	0.99	−1.82	1907	0.28	−2.53
1899	3.82	+1.01	1908	1.85	−0.96
1900	5.21	+2.40	1909	4.52	+1.71
1901	2.65	−0.16	1910	1.91	−0.90
1902	3.61	+0.80	1911	1.00	−1.81
1903	5.03	+2.22	1912	2.85	+0.04
1904	1.43	−1.38	1913	5.00	+2.19
1905	2.26	−0.55			

The greatest monthly amount was 19.29 inches a Helen Mine and the greatest 24-hour amount was 4.39 inches at Kennett on the 26th. At Bagdad, in the Colorado desert, there was no rain.

Stations.	Sunshine.	
	Hours.	Percentage of possible.
Eureka	67	23
Red Bluff	111	37
Sacramento	302	57
Mount Tamalpais	142	47
San Francisco	148	49
San Jose	138	45
Fresno	139	46
San Luis Obispo	160	51
Los Angeles	240	77
San Diego	248	79

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS DURING THE MONTH OF NOVEMBER, 1913.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—Although precipitation in this watershed was much in excess of the normal amount for the month the general average of all streams was considerably below the stages that are usually maintained during November.

Up until the last decade of the month the increased run-off of mountain streams and the main feeders of the trunk stream was barely noticeable. This, no doubt, was due to the dry condition of the entire watershed and to the fact that many of the small waterways were quite dry when the rains began.

There was a slight rise in the upper Sacramento River on the 26th, but from the 27th to the close of the month substantial rises occurred at all points from Red Bluff to Walnut Grove.

No rises much in excess of 2 feet occurred in the American, Feather, or Yuba Rivers. The average stage of the Feather at Oroville was the lowest of which there is a record for November, and the average stage of the Yuba at Marysville lacked only 0.2 of a foot of the previous November low-water record, which was in 1910.

Lower San Joaquin watershed.—There was little departure in the precipitation in this watershed from the seasonal normal. All streams rose slightly after the middle of the month, but the general average was practically the same as that of the preceding month.

NOTES ON THE STREAMS OF THE UPPER SAN JOAQUIN WATERSHED.

By W. E. BONNETT, Local Forecaster.

Although more than normal rainfall occurred generally over the watershed of the upper San Joaquin during November, it came upon an unusually parched soil and there was very little run-off. Fluctuations in the streams were small and the stages at the close were only slightly higher than those at the beginning of the month.

Average stages for the month were low, but lower mean stages for all points are shown in the record for November, 1908 and 1910. Following are the mean gage heights for November this year and the 7-year average for the several stations: Merced Falls, 0.3 foot and −0.1 foot; Friant, −0.6 foot and −0.4 foot; Firebaugh, −0.9 foot and −0.3 foot; Piedra, 4.5 feet and 4.6 feet.

Rainfall at Merced Falls and Firebaugh was greater than in any November of the last seven years, and at Piedra and Friant it was exceeded only in 1909.

TABLE 1.—*Climatological data for November, 1913. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																			
Chiloquin	Klamath	4,200	....	35.4	.....	60	7†	12	14†	35	2.85	.....	1.14	4.8	15	2	8	20	sw.	H. W. Hincks.
Klamath Falls	....do	4,100	23	39.5	+ 0.3	63	7†	20	14†	30	1.99	+ 0.50	0.52	1.0	8	3	8	19	se.	Augusta J. Hayden.
Lakeview	Lake	4,825	29	36.4	− 1.5	66	7	7	22	35	1.62	− 0.28	0.60	4.8	11	5	5	20	s.	C. C. Gott.
Merrill	Klamath	4,070	6	37.8	.....	59	8†	12	15	38	1.44	.....	0.73	0	4	21	0	9	.....	U. S. Reclamation Service.
Yonna	....do	4,146	5	34.5	.....	62	9	9	14	50	2.09	.....	0.62	1.0	7	1	13	16	s.	Ward Rueck.
California.																				
Alturas	Modoc	4,400	9	40.0	.....	73	7	10	21	42	1.59	.....	0.42	2.0	9	8	7	15	sw.	Prof. C. B. Towle.
Angiola	Tulare	208	13	48.6	− 3.4	68	7	29	29†	31	1.68	+ 1.00	0.55	0	5	8	0	22	nw.	Santa Fe Co.
Antioch **	Contra Costa	46	34	59.7	+ 5.9	87	1	39	4†	....	4.22	+ 2.84	0.82	0	12	11	0	19	.....	S. P. Co.
Aptos **	Santa Cruz	102	28	55.2	+ 2.2	70	7	35	23	....	5.48	+ 2.50	1.55	0	13	11	8	11	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	4	58.6	.....	86	8	39	29	23	4.38	.....	1.28	0	7	18	8	4	.....	Dr. E. J. Erekson.
Auburn	Placer	1,360	42	50.3	− 4.7	86	7	32	22†	40	3.52	− 0.40	0.84	0	16	11	4	15	w.	S P. Co.
Avalon	Los Angeles	30	3	61.0	.....	81	9	50	19†	22	1.57	.....	1.13	0	6	17	9	4	w.	T. S. Manning.
Azusa	....do	540	11	58.8	− 0.2	94	8	38	30	41	3.70	+ 2.14	1.29	0	7	23	3	4	.....	A. P. Griffith.
Bagdad	San Bernardino	784	10	62.2	+ 0.3	85	8†	43	29	31	0.00	− 0.19	0	0	0	....	....	....	.....	Santa Fe Co.
Bakersfield	Kern	404	24	70.6	+15.0	92	9	40	30	25	0.92	+ 0.46	0.61	0	2	16	6	8	.....	Do.
Barstow	San Bernardino	2,105	10	64.1	+ 9.2	86	9	40	23	29	0.78	+ 0.48	0.48	0	3	22	5	3	w.	E. L. White.
Berkeley	Alameda	317	26	54.3	+ 0.1	75	7	40	24†	23	5.83	+ 3.28	1.40	0	17	7	10	13	s.	State University.
Betteravia	Santa Barbara	155	....	56.3	.....	80	7	32	30	32	2.32	.....	0.95	0	7	9	13	8	w.	Union Sugar Co.
Biggs **	Butte	98	14	55.9	− 0.8	81	3	34	23	....	4.96	+ 2.36	1.00	0	11	17	0	13	.....	S. P. Co.
Bishop	Inyo	4,450	18	44.4	.. 1.8	81	9	16	28	57	0.56	+ 0.13	0.30	0	2	14	6	10	n.	Paul E. Lodge.
Bishop Creek	....do	8,500	3	32.4	.....	56	6	10	22	25	2.10	.....	1.20	21.0	6	15	0	15	.....	Do.
Blocksburg	Humboldt	1,700	7	49.0	.....	76	1	30	22†	31	11.09	.....	1.28	0	16	3	8	19	s.	Victor Hope.
Blue Canon	Placer	4,695	14	51.5	+ 7.0	78	9	11	22	38	11.39	+ 2.64	1.78	17.0	17	5	3	22	se.	S. P. Co.
Blythe	Riverside	268	4	60.6	.....	93	8	33	6	50	1.08	.....	0.62	0	3	17	8	5	n.	C. L. Suits.
Branscomb	Mendocino	2,000	13	48.8	− 0.4	76	15	29	20†	43	12.34	− 1.71	2.03	0	14	10	7	13	n.	A. J. Haun.
Brawley	Imperial	−105	4	63.2	.....	90	9	40	26	42	0.25	.....	0.15	0	2	....	....	....	.....	M. D. Witter.
Burney	Shasta	3,300	3	39.9	.....	67	7†	16	22	38	4.29	.....	1.18	2.0	11	4	10	16	sw.	Mrs. M. D. Chambers.
Cahuilla	Riverside	3,600	2	49.8	.....	77	8†	28	17†	44	2.57	.....	0.70	0	6	19	8	3	e.	Dr. W. L. Shawk.
Calexico	Imperial	0	8	62.9	.....	84	2	40	28	29	0.03	.....	0.02	0	2	28	0	2	w.	J. E. Peck.
Caliente **	Kern	1,200	37	53.3	− 1.9	85	8	32	23†	....	1.93	+ 1.17	0.75	0	5	16	0	14	.....	S. P. Co.
Calistoga **	Napa	363	41	53.2	− 0.2	73	1	32	23	....	6.15	+ 2.30	2.00	0	13	4	0	26	s.	Do.
Campbell	Santa Clara	217	16	52.8	+ 0.1	75	7	30	23†	30	3.04	+ 1.46	1.15	0	10	9	3	18	se.	F. M. Righter.
Camptonville (near)	Yuba	3,500	6	46.2	.....	76	7	30	21†	30	13.09	.....	2.40	3.0	15	11	4	15	s.	Cal. Gas & Elec.
Cedarville	Modoc	4,675	19	39.5	+ 0.2	65	8	18	30	35	1.69	− 0.18	0.67	3.0	10	11	18	1	sw.	T. H. Johnstone.
Chico	Butte	189	43	52.4	− 1.4	72	2†	28	22	33	7.27	+ 4.64	2.62	0	13	10	1	19	s.	G. H. Stephenson.
China Flat	Humboldt	600	4	51.3	.....	75	3	36	22†	30	8.96	.....	2.25	0	13	4	13	13	s.	O. I. Westerburg.
Chino	San Bernardino	714	21	58.2	+ 1.2	80	8	32	28†	....	1.31	− 0.02	1.31	0	1	16	13	1	s.	S. P. Co.
Cisco **	Placer	5,939	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Claremont	Los Angeles	1,200	21	58.8	+ 0.5	92	8	37	22†	37	3.23	+ 1.92	1.35	0	10	21	4	5	w.	Prof. F. P. Brackett.
Cloverdale	Sonoma	340	11	52.8	− 1.3	77	7	29	24	32	9.30	+ 5.27	2.31	0	14	14	0	16	s.	John O. Ogle.
Coalinga	Fresno	663	1	56.4	.....	83	9	32	22†	44	1.82	.....	0.63	0	5	13	7	10	sw.	Union Oil Co.
Colfax	Placer	2,421	42	56.6	+ 4.9	81	3	28	30	41	6.84	+ 1.76	1.08	1.0	14	7	6	17	.....	S. P. Co.
Colusa	Colusa	60	10	55.9p	+ 3.3	72p	9	39p	28	24	5.54	+ 3.98	1.71	0	13	3m	1m	13m	.....	C. D. McComish.
Corning **	Tehama	277	27	57.2	+ 2.1	74	27	38	23†	....	3.16	+ 0.74	0.84	0	11	7	10	13	s.	S. P. Co.
Cuyamaca	San Diego	4,677	14	45.1	+ 1.1	71	11	25	26	37	4.86	+ 1.51	1.90	0	8	17	5	8	w.	Cuyamaca Water Co.
Davisville	Yolo	51	41	51.6	− 4.1	73	8	27	22†	34	4.63	+ 2.92	1.74	0	11	12	10	8	n.	S. H. Beckett.
Deer Creek	Nevada	3,700	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cal. Gas & Elec.
Del Monte	Monterey	25	2	56.8	.....	77	7	36	23	28	3.42	.....	0.66	0	11	13	7	10	nw.	H. R. Warner.
Delta	Shasta	1,138	28	52.2	+ 0.7	85	1†	30	20†	38	9.86	+ 2.68	1.90	0	12	10	1	19	s.	S. P. Co.
Denair	Stanislaus	126	13	52.6	− 1.9	73	9	30	23†	32	1.78	+ 0.34	0.51	0	5	19	0	11	.....	Santa Fe Co.
De Sabla	Butte	2,500	9	46.4	.....	75	8	26	21†	33	14.07	.....	2.90	3.0	15	8	7	15	s.	Cal. Gas & Elec.
Dobbins (near)	Yuba	1,650	9	53.0	.....	82	8	34	22†	30	8.19	.....	1.83	0	15	8	11	11	s.	Do.
Downieville	Sierra	3,150	2	43.6	.....	73	7	23	22	42	10.54	.....	1.68	2.0	18	9	5	16	s.	J. T. Mason.
Dudley	Kings	595	1	58.2	.....	87	9	31	23	46	1.17	.....	0.30	0	8	12	10	8	sw.	Union Oil Co.
Dudleys	Mariposa	3,000	4	45.0	.....	79	8	23	22†	45	5.01	.....	1.08	T.	12	10	7	13	nw.	W. H. Dudley.
Dunlap (near)	Fresno	2,800	1	48.0	.....	81	8	26	30	36	5.30	.....	1.31	1.0	14	8	5	17	.....	U. S. Forest Service.
Dunnigan **	Yolo	65	36	57.1	+ 2.1	73	6	44	20	....	5.43	+ 3.35	1.78	0	13	10	3	17	n.	S. P. Co.
Dunsmuir **	Siskiyou	2,285	24	44.0	− 1.3	80	8	26	21†	....	10.05	+ 3.24	1.88	1.0	16	10	0	20	s.	Do.
Durham	Butte	160	18	52.4	0	73	6	30	23	29	4.96	+ 1.81	1.56	0	12	13	7	10	s.	R. W. Durham.
El Cajon	San Diego	482	14	58.7	− 0.4	93	9	37	23	47	2.83	+ 1.44	1.15	0	7	25	2	3	w.	H. H. Kessler.
Electra	Amador	725	9	51.8	.....	80	8	32	22†	34	4.15	.....	0.65	0	13	13	10	7	.....	Cal. Gas & Elec.
Emigrant Gap	Placer	5,230	39	37.9	− 5.1	68	1	11	28	36	8.68	+ 4.41	1.40	19.0	18	13	0	17	s.	S. P. Co.
Escondido	San Diego	657	19	55.4	− 0.4	89	9	35	26†	45	2.54	+ 1.30	1.01	0	7	1	27	2	w.	A. R. Moon.
Eureka	Humboldt	64	27	50.8	− 0.2	68	3	38	30	20	5.29	− 0.03	1.15	0	15	2	8	20	sw.	U. S. Weather Bureau
Farmington **	San Joaquin	111	34	51.8	− 2.9	76	10	32	27	....	2.96	+ 1.24	0.57	0	9	18	0	12	.....	S. P. Co.
Folson	Sacramento	252	41	56.4	+ 1.8	76	8	33	22	28	4.92	+ 2.23	0.88	0	15	7	6	17	se.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	18	38.3	.....	66	7†	10	22	32	12.62	+ 4.97	2.30	85.5	19	6	9	15	sw.	E. E. Roenig.
Fort Bidwell	Modoc	4,375	24	38.3	− 0.9	60	7†	13	22	26	2.41	+ 0.39	0.54	4.5	10	5	5	20	.....	C. R. Decious.
Fouts Springs	Colusa	1,650	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. J. Burgi.
Fresno	Fresno	293	26	55.2	+ 0.6	79	8	34	23	29	1.86	+ 0.69	0.68	0	8	5	16	9	nw.	U. S. Weather Bureau
Galt **	Sacramento	49	35	56.1	+ 2.1	75	6	41	28	....	4.13	+ 2.32	0.87	0	13	1	4	25	sw.	S. P. Co.
Georgetown	El Dorado	2,650	40	47.0	− 8.4	75	10	28	22	30	6.14	− 0.12	1.05	0	11	....	....	....	.....	G. L. Buchler.
Gilroy **	Santa Clara	193	39	54.2	+ 1.4	80	8	35	22†	....	3.28	+ 1.18	0.82	0	11	10	0	20	se.	S. P. Co.
Gilta	Siskiyou	3,300	3	46.4	.....	70	9	25	20	34	9.92	.....	2.52	0	13	6	1	23	.....	A. Dannenbrink.
Glennville	Kern	3,300	3	47.7	.....	79	8	29	22	29	4.15	.....	1.33	3.0	10	10	9	11	.....	C. H. Likely.
Gold Run	Placer	3,222	14	46.0	− 5.4	81	9	26	22	34	9.29	+ 2.45	1.56	0.5	16	13	0	17	w.	S. P. Co.
Gonzales **	Monterey	127	14	60.4	+ 6.8	78	7†	47	28	....	3.01	+ 1.39	0.80	0	10	11	3	16	.....	Do.
Grass Valley	Nevada	2,690	41	47.8	.....	74	8	29	22	30	9.14	+ 3.21	1.82	1.0	15	10	4	16	sw.	Mrs. L. M. Wentworth.
Greenland Ranch	Inyo	−178	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Corkhill.
Greenville	Plumas	3,600	19	37.2	− 4.3	68	1	8	23	46	6.21	+ 1.48	1.33	7.0	13	7	6	17	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. S. Richardson.
Guinda **	Yolo	350	15	50.2	− 2.9	69	2	28	22	....	4.80	+ 2.68	1.85	0	10	13	8	9	n.	S. P. Co.
Hanford	Kings	249	13	51.8m	− 2.1	70m	18	30m	23	....	....	....	....	....	....	....	....	....	.....	Santa Fe Co.
Healdsburg	Sonoma	110	20	53.4	− 0.7	77	7	31	24	31	10.20	+ 5.71	2.00	0	15	13	0	17	se.	Dr. F. J. Kinley.
Hearst (near)	Mendocino	1,800	3	45.6	.....	66	2	30	23	21	8.40	.....	1.07	0	11	7	9	14	.....	H. D. Ellmaker.
Heber	Imperial	−20	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. E. Hamilton.
Hetch Hetchy	Tuolumne	3,665	3	43.0	.....	72	9	21	24	39	4.85	.....	0.71	1.0	18	13	3	14	n.	E. J. Koppitz.
Hollister	San Benito	284	39	53.6	− 0.9	81	8	32	23	32	2.96	+ 1.47	0.96	0	12	11	6	13	w.	J. N. Thompson.
Hornbrook	Siskiyou	2,154	25	45.0	+ 0.9	75	12†	25	29	....	3.55	+ 1.10	0.90	0	10	0	12	18	s.	S. P. Co.
Hot Springs	Tulare	3,300	6	48.4	.....	77	8	30	22	30	4.67	.....	1.06	2.0	9	11	8	11	.....	U. S. Forest Service.
Hullville	Lake	2,250	6	46.9	.....	79	7	27	22†	38	10.22	.....	2.25	0	20	4	12	14	sw.	T. H. Betterton.

TABLE 1.—*Climatological data for November, 1913. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
California—Continued.																				
Independence	Inyo	3,907	17	46.0	− 3.2	76	7	24	23	36	0.95	+ 0.84	0.54	0	6	9	11	10	.....	U. S. Weather Bureau.
Indian Wells	Kern	2,500																		I. D. McCoy.
Indio	Riverside	−20	35	65.1	+ 2.5	96	7	37	29	48	0.07	− 0.15	0.07	0	1	18	10	2	nw.	F. N. Johnson.
Inskip	Butte	4,975	6	40.8	.....	68	7	22	21	24	14.62	.....	2.50	11.2	15	6	4	20	.....	California Gas & Electric Co.
Ione**	Amador	287	35	54.0	+ 0.6	70	6	30	22†	....	4.45	+ 2.30	0.80	0	15	15	0	15	.....	Southern Pacific Co.
Jamestown	Tuolumne	1,471	10	49.0	− 1.9	86	1	30	28†	45	4.50	+ 2.58	0.85	0	11	.....	.....	.....	.....	Sierra Ry. Co.
Lennett	Shasta	730	1	46.7	.....	75	7	24	21†	34	12.54	.....	2.91	0	14	6	12	12	sw.	C. H. Kremers.
Kentfield	Marin	65	25	53.2	.....	71	6	34	22	25	12.84	+ 8.24	3.07	0	14	.....	.....	.....	sw.	Miss M. E. Parsons.
King City	Monterey	333	26	61.2	+ 7.3	92	4	30	23†	51	2.28	+ 1.01	1.28	0	7	16	0	14	n.	Southern Pacific Co.
Lake Eleanor	Tuolumne	4,700	3																	O. J. Todd.
La Porte	Plumas	5,000	19	39.1	− 1.9	67	8	17	21	36	11.50	+ 2.44	2.12	26.8	16	10	2	18	s.	C. W. Hendel.
Le Grand	Merced	255	13	52.4	+ 0.7	77	9	35	28	33	3.58	+ 2.14	0.89	0	6	13	0	17	e.	Santa Fe Co.
Lemon Cove	Tulare	600	18	57.4	+ 0.8	84	8	32	21	34	3.21	+ 1.65	1.05	0	7	5	12	13	s.	W. R. Park.
Lick Observatory	Santa Clara	4,209	24	43.1[a]	− 5.3	68[a]	9	27[a]	21	17[a]	5.34	+ 2.40	1.07	3.0	20	9[a]	8[a]	12[a]	n.	The Director.
Livermore	Alameda	485	42	54.2[c]	− 0.7	76[c]	7	30[c]	24	34[c]	2.47	+ 0.80	0.35	0	16	8	6	16	n.	E. G. Still.
Lone Pine	Inyo	2,728	8	48.2	.....	77	8	21	23	41	0.41	.....	0.41	0	1	18	11	1	s.	G. F. Marsh.
Long Valley	Lassen	4,400	4																	A. G. Evans.
Los Angeles	Los Angeles	293	36	61.8	+ 3.4	92	8	45	30	31	3.00	+ 1.62	1.59	0	7	15	6	9	ne.	U. S. Weather Bureau.
Los Banos**	Merced	121	26																	Southern Pacific Co.
Los Gatos	Santa Clara	600	26	53.2	− 0.8	76	8	37	16†	25	6.49	+ 3.12	1.80	0	12	9	2	19	s.	F. H. McCullagh.
McCloud	Siskiyou	3,410	3	41.0	.....	73	7	18	22	40	9.60	.....	1.79	4.0	14	13	5	12	.....	F. F. Spencer.
Macdoel	.....do	4,528	8	33.7	.....	56	7	11	13	30	0.88	.....	0.75	4.8	5	7	14	9	s.	Butte Valley Land Co.
Madeline	Lassen	5,270	4																	J. H. Williams.
Magalia	Butte	2,321	9	49.0	.....	90	9	22	15†	56	10.71	.....	2.20	0.2	17	12	0	18	se.	Butte County R. R. Co.
Mammoth Tank	Imperial	257	35	62.2	− 1.6	82	8	44	26†	29	0.90	+ 0.79	0.45	0	3	20	6	4	.....	Southern Pacific Co.
Maricopa	Kern	640	2	57.0	+ 0.6	88	9†	33	23	39	0.65	.....	0.40	0	4	10	8	12	n.	Union Oil Co.
Marysville	Yuba	67	42	54.1	− 2.3	76	7	31	21	29	5.90	+ 3.65	1.50	0	14	14	0	16	s.	Southern Pacific Co.
Mecca	Riverside	− 185	7	63.8	.....	94	8	34	29	49	0.20	.....	0.10	0	2	16	10	4	se.	E. A. Palmer.
Menlo Park**	San Mateo	64	35	55.0	+ 1.8	70	8	35	25	....	4.52	+ 2.83	0.80	0	11	8	2	19	nw.	Southern Pacific Co.
Merced	Merced	173	39	54.7	− 0.7	77	10	30	23	30	2.69	+ 1.48	0.78	0	8	8	8	14	nw.	Santa Fe Co.
Middlewater	Kern	803	2	58.6	.....	84	9	32	29†	20	0.93	.....	0.31	0	6	13	2	15	w.	Union Oil Co.
Mill Creek No. 1	Amador	2,500	6	48.4	.....	78	7	28	22	35	6.12	.....	0.99	0	14	12	4	14	n.	California Gas & Electric Co.
Milton (near)	Calaveras	660	22	54.2	− 1.4	74	8	36	22†	22	3.58	+ 1.35	0.64	0	11	10	5	15	se.	J. H. Southwick.
Modesto**	Stanislaus	90	41	51.2	− 4.6	84	1	30	23	....	3.68	+ 2.32	0.72	0	9	16	2	12	.....	Southern Pacific Co.
Mojave	Kern	2,751	36	50.6	− 4.2	92	9	32	22†	....	0.04	− 0.35	0.02	0	3	22	4	4	w.	Do.
Mokelumne Hill	Calaveras	1,550	20	53.0	+ 1.2	80	8	35	22	22	3.96	+ 0.24	0.65	0	13	11	1	18	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	7	46.6	.....	78	7	26	23	40	6.85	+ 5.77	3.10	0	7	19	5	6	w.	Herbert Lathrop.
Montague	Siskiyou	2,450	25	44.0	− 0.4	72	8	21	14	35	1.91	+ 0.07	0.53	0	10	5	12	13	s.	I. E. DeBoy.
Monterey**	Monterey	15	48	56.4	+ 2.1	70	9	36	22	....	3.71	+ 2.16	0.84	0	11	17	6	7	se.	Southern Pacific Co.
Monterio	Kern	4,500	14																	John C. Knecht.
Mount Tamalpais	Marin	2,375	14	47.7	− 2.9	70	8	36	30	15	6.56	+ 1.14	2.09	0	17	9	3	18	nw.	U. S. Weather Bureau.
Napa City	Napa	20	36	56.4	+ 5.6	80	8	33	24	35	6.38	+ 3.89	1.90	0	11	1	19	10	s.	Alex. Hull.
Napa (S. H.)	.....do	60	35	55.6	+ 1.5	74	8	41	22†	18	5.22	+ 2.73	1.19	0	15	5	5	20	sw.	A. E. Edgar.
Needles	San Bernardino	477	21	64.6	+3.9	86	11	49	30	32	1.78	+1.36	1.18	0	4	19	7	4	w.	Santa Fe Co.
Nellie	San Diego	5,350	4																	T. O. Bailey.
Nevada City	Nevada	2,850	21	46.7	− 1.1	82	8	22	22	41	8.48	+2.29	1.66	0.5	14	10	4	16	se.	S. W. Marsh.
Newhall **	Los Angeles	1,200	36	65.1	+10.3	89	9†	40	30	....	2.80	+1.43	1.30	0	3	19	0	11	s.	S. P. Co.
Newman	Stanislaus	91	24	54.4	− 1.7	79	2	32	25	34	3.54	+2.42	0.58	0	12	.....	.....	.....	.....	E. S. Wangenheim.
North Bloomfield	Nevada	3,214	16	45.2	− 2.9	76	8	23	28	34	8.79	+2.28	1.47	0	12	8	4	18	w.	J. R. McIntosh.
North Fork	Madera	3,000	9	52.0	.....	86	10	28	24	45	3.89	.....	1.10	0	11	6	16	8	sw.	U. S. Forest Service.
Oakdale **	Stanislaus	156	19	54.0	+ 2.1	72	9	38	21†	....	3.49	+0.22	0.65	0	13	11	4	15	nw.	S. P. Co.
Oak Grove	San Diego	2,751	3																	B. L. Johnson.
Oakland	Alameda	36	37	54.4	+ 0.6	72	7	40	22†	20	5.68	+2.86	1.26	0	15	6	8	16	w.	Chabot Observatory.
Oceanside	San Diego	60	3	62.4	.....	85	8	46	30	27	2.00	.....	0.86	0	7	20	3	7	w.	H. D. Brodie.
Ojai Valley	Ventura	900	7	58.2	.....	97	8	31	23	48	4.48	.....	1.66	0	6	16	10	4	sw.	W. H. Duncan.
Orland	Glenn	254	31	52.4	− 4.0	76	7	32	20	29	5.12	+2.91	2.29	0	13	10	7	13	n.	U. S. Reclamation Service.
Orleans	Humboldt	520	10	53.4	+ 1.5	79	2	37	30	31	7.99	−0.67	2.49	0	16	12	0	18	.....	F. T. Hale.
Oroville (near)	Butte	250	29	53.0	− 2.9	70	8	33	22†	24	7.45	+3.98	1.95	0	13	9	5	16	s.	E. D. Fairchild.
Palermo	.....do	213	22	52.0	− 0.7	70	12†	23	30	30	7.00	+4.05	1.50	0	6	8	8	14	s.	Western Pacific Co.
Palm Springs **	Riverside	584	24	64.1	− 0.3	85	8	43	29	....	0.10	−0.20	0.10	0	1	26	0	4	.....	S. P. Co.
Pasadena	Los Angeles	827	23	56.7	− 2.4	92	8	36	22†	44	3.20	+2.80	1.42	0	7	19	5	6	sw.	E. D. Sorver.
Paso Robles	San Luis Obispo	800	26	53.8	+ 2.3	92	9	26	24	50	3.02	+1.82	1.32	0	7	12	14	4	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	17	52.5	− 0.6	75	7	29	24	30	9.62	+4.76	2.60	0	18	9	9	12	s.	E. H. Parnell.
Petaluma	.....do			50.9	.....	71	7	30	22	24	6.70	.....	2.80	0	17	7	12	11	s.	John Landis.
Placerville	El Dorado	1,875	24	48.4	+ 0.3	72	9	28	22	26	5.24	+0.40	0.75	0	17	.....	.....	.....	.....	A. E. May.
Point Lobos	San Francisco	250	20	51.6	− 3.9	66	7	43	23	12	6.11	+4.07	2.30	0	13	7	6	17	nw.	John Hyslop.
Point Reyes	Marin	490	21	52.7	− 1.2	70	8	45	29	17	4.59	+1.64	1.20	0	18	7	7	16	nw.	U. S. Weather Bureau.
Pomona	Los Angeles			57.2	.....	93	8	32	23	44	4.02	.....	1.50	0	9	12	8	10	e.	J. E. Adamson.
Porterville	Tulare	464	24	55.4	+ 0.5	85	8	32	22	38	2.18	+1.42	0.81	0	6	18	6	6	.....	Leslie McAuliff.
Quincy	Plumas	3,400	18	43.4	+ 2.2	63	15†	22	22†	35	6.75	+1.03	1.40	2.0	13	12	4	14	s.	U. S. Forest Service.
Red Bluff	Tehama	307	36	52.4	− 1.0	78	7	33	23	26	5.34	+2.24	2.34	0	13	8	5	17	se.	U. S. Weather Bureau.
Redding	Shasta	552	38	51.7	− 2.4	79	7	32	23	30	7.37	+3.20	1.20	0	19	6	12	12	nw.	W. W. Jones.
Redlands	San Bernardino	1,352	20	57.8	− 0.3	89	8	36	22	38	2.82	+1.87	1.45	0	6	18	4	8	w.	W. S. Devol.
Reedley	Fresno	347	13	55.2	+ 1.6	89	4	33	23	41	2.20	+1.32	0.97	0	5	16	0	14	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	7	58.5	.....	85	8†	40	30	25	5.04	.....	1.40	0	3	15	9	6	n.	So. Cal. Edison Co.
Riverside	Riverside	851	31	60.3	+ 2.1	94	8†	37	22	45	1.78	+1.01	0.79	0	7	12	14	4	w.	J. H. D. Cox.
Rocklin	Placer	249	42	54.4	+ 0.5	74	2†	30	23	24	4.39	+2.16	1.06	0	13	10	0	20	.....	S. P. Co.
Rohnerville	Humboldt	75	10	52.4	.....	77	8	38	16†	28	6.27	+0.18	1.21	0	12	2	9	19	se.	Dr. R. Callahan.
Sacramento	Sacramento	71	36	53.6	+ 0.2	72	6	36	23	21	4.58	+2.43	1.61	0	12	11	9	10	se.	U. S. Weather Bureau.
St. Helena	Napa	255	5	52.2	.....	80	7	30	24	34	6.88	.....	2.56	0	16	11	2	17	.....	E. E. Hooper.
Salinas	Monterey	40	39	55.8[c]	+ 2.7	78[c]	7	33[c]	23	34[c]	2.29	+0.91	0.46	0	11	15[c]	4[c]	6[c]	n.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	21	58.4	+ 1.0	93	8	33	23	47	2.54	+1.15	1.14	0	7	13	12	5	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	42	60.8	+ 1.8	82	9	48	23	24	2.23	+1.45	1.19	0	8	20	5	5	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	42	55.2	− 0.3	72	7	46	24	18	6.22	+3.54	2.21	0	15	8	6	16	w.	Do.
San Jacinto	Riverside	1,550	20	56.6	+ 0.2	92	9	35	22†	46	2.13	+1.05	1.32	0	4	14	6	10	w.	E. T. Tanner.
San Jose	Santa Clara	95	38	54.2	− 0.2	78	7	32	24	30	4.10	+2.60	1.73	0	15	6	10	14	se.	U. S. Weather Bureau.
San Luis Obispo	San Luis Obispo	201	18	56.7	+ 0.4	86	8	36	24	36	3.97	+1.96	1.30	0	10	9	9	12	n.	Do.
San Mateo **	San Mateo	22	39	57.8	+ 4.0	73	2	40	24	....	5.49	+ 3.09	1.28	0	14	9	3	18	.....	S. P. Co.
San Miguel **	San Luis Obispo	616	26	54.8	+ 0.9	82	8	32	24	....	2.58	+ 1.65	1.42	0	6	5	6	19	.....	Do.
San Miguel Island	Santa Barbara	500	19	59.0	.....	73	7†	48	24†	18	1.18	+ 0.06	0.45	0	6	20	5	5	w.	Capt. W. G. Waters.
Sanger **	Fresno	371	24																	S. P. Co.
Santa Barbara	Santa Barbara	130	29	58.4	− 0.8	88	8	39	23	36	3.43	+ 1.89	1.91	0	6	18	5	7	w.	G. W. Russell.
Santa Clara	Santa Clara	90	24	55.0	+ 1.1	80	7	30	23†	35	4.14	+ 2.45	0.95	0	15	15	1	14	nw.	Santa Clara University.
Santa Cruz	Santa Cruz	20	40	54.7	− 0.8	81	7	32	23	36	5.78	+ 3.00	0.95	0	14	18	0	12	w.	W. R. Springer.

TABLE 1.—*Climatological data for November, 1913. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Continued.																		
Santa Margarita**	San Luis Obispo	996	24	61.5	+ 9.2	80	18	30	30	....	3.69	+ 1.65	1.51	0	7	7	12	11	s.	S. P. Co.
Santa Monica	Los Angeles	110	28	57.2	− 1.9	90	8	41	29†	30	1.63	0.00	0.99	0	4	15	8	7	w.	F. E. Hill.
Santa Rosa	Sonoma	181	24	51.7	− 1.9	68	17	30	22†	30	7.50	+ 4.24	2.60	0	15	....	....	....	.....	S. P. Co.
Selma**	Fresno	311	27	.....	.....	79	1	39	30	....	2.19	+ 1.39	0.80	0	7	17	0	13	.....	Do.
Seven Oaks	San Bernardino	5,000	3	44.2	.....	75	8	24	25†	35	4.10	.....	1.30	6.0	8	20	2	8	n.	M. Lewis.
Sierra Madre	Los Angeles	1,400	16	57.2	− 2.8	88[a]	8	42	14†	34	3.32	+ 1.44	1.20	0	7	19	6	5	w.	Mrs. A. E. Gregory.
Sierraville	Sierra	5,000	3	38.2	.....	70	8	13	22	43	3.30	.....	1.00	1.0	8	8	1	21	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	24	39.4	− 1.9	67	8	17	20	28	7.63	+ 3.22	1.50	17.0	11	13	11	6	n.	S. P. Co.
Soledad**	Monterey	188	39	53.1	− 0.1	70	9	40	25†	....	3.36	+ 2.31	1.36	0	6	16	0	14	s.	Do.
Sonora	Tuolumne	1,825	2	51.4	.....	76	9	32	22	30	4.07	+ 0.42	0.78	0	12	10	9	11	sw.	Chas. P. Jones.
Southeast Farallon	San Francisco	30	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Springville	Tulare	4,000	6	45.8	.....	79	9	27	22	33	6.05	.....	2.25	12.0	10	12	7	11	.....	D. L. Wishon.
Squirrel Inn	San Bernardino	5,280	3	46.1	.....	70	1†	27	30	30	7.70	.....	2.48	2.0	6	16	3	11	n.	A. D. Frantz.
Stanwood	Butte	2,140	9	46.0	.....	62	1	27	21	20	12.87	.....	2.54	0.5	12	7	4	19	s.	California Gas & Electric.
Stirling City	....do	3,525	9	50.4	.....	82	2	23	20	45	13.13	.....	2.85	8.0	13	4	6	20	.....	Butte Co. R. R. Co.
Stockton (S. H.)	San Joaquin	23	42	53.0	− 0.9	70	1	31	23	26	3.14	+ 1.58	0.60	0	13	12	17	11	se.	State Hospital.
Storey	Madera	296	13	53.0	+ 0.8	76	10	32	22†	30	1.05	− 0.08	0.77	1.0	2	20	0	10	.....	Santa Fe Co.
Suisun**	Solano	20	33	56.6	+ 1.8	71	1	37	23†	....	5.49	+ 3.33	1.00	0	17	11	0	19	.....	S. P. Co.
Sulphur Banks	Lake	1,350	1	52.0	.....	79	7	22	21	48	7.72	.....	1.75	0	11	6	0	24	w.	L. S. Lorenzen.
Summit	Placer	7,017	40	33.8	− 2.0	61	8	16	22	26	7.70	+ 3.73	2.10	62.5	18	9	0	21	s.	S. P. Co.
Susanville	Lassen	4,175	24	42.5[d]	+ 1.5	67[d]	8	18[d]	22	38[d]	1.55	− 0.88	0.35	0.8	8	6	8	16	.....	C. M. Perry.
Tamarack	Alpine	8,000	7	32.0	.....	62	4	− 3	29	48	6.35	+ 0.75	0.86	63.0	18	9	7	14	sw.	California Gas & Electric.
Tehachapi**	Kern	3,964	26	49.6	+ 3.1	78	9	32	16	....	0.76	+ 0.12	0.48	2.0	3	....	....	....	w.	S. P. Co.
Tehama	Tehama	220	42	59.0	+ 3.9	77	4	38	24	....	4.38	+ 1.99	1.40	0	6	11	4	15	s.	Do.
Tejon Rancho	Kern	1,500	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. E. Bailey.
Three Rivers	Tulare	870	3	54.8	.....	83	8	31	23	41	3.88	.....	1.10	0	11	10	5	15	sw.	J. H. Pierce.
Towle	Placer	3,704	27	50.4	+ 1.7	72	7	26	22	34	8.66	+ 0.85	1.20	2.0	15	12	1	17	.....	S. P. Co.
Tracy**	San Joaquin	64	33	52.2	− 2.0	70	1†	28	23	....	2.56	+ 1.42	0.59	0	13	....	....	....	.....	Do.
Ukiah	Mendocino	620	20	49.1	− 1.5	70	7	30	22	28	8.38	+ 4.23	2.46	0	14	13	0	17	nw.	Dr. Geo. McCowen.
Upper Lake	Lake	1,350	28	49.0	− 1.8	76	7	26	22	38	7.16	+ 4.12	2.26	0	13	9	6	15	se.	C. M. Hammond.
Vacaville	Solano	175	25	58.8	+ 3.4	75	1	41	22	21	5.62	+ 2.76	1.12	0	13	....	....	....	.....	G. O. Coburn.
Valley Springs**	Calaveras	673	24	57.8	+ 1.4	78	8	33	24	....	4.02	+ 1.33	0.65	0	10	14	6	10	.....	S. P. Co.
Visalia	Tulare	334	25	56.6	+ 3.0	78	8	30	22	40	2.08	+ 1.23	0.92	0	4	8	0	22	nw.	Santa Fe Co.
Warner Springs	San Diego	3,165	5	53.0	.....	85	9	28	30	44	1.52	.....	0.68	0	7	20	4	6	.....	Mrs. F. S. Sandford.
Wasco	Kern	336	13	54.9	+ 1.5	83	9	30	23	37	1.14	+ 0.64	0.57	0	4	4	18	8	se.	Santa Fe Co.
Watsonville	Santa Cruz	23	17	55.6	+ 1.0	85	7†	31	22	37	4.19	+ 1.63	0.91	0	16	8	14	8	w.	Spreckels Sugar Co.
Weaverville	Trinity	2,162	1	45.2	.....	71	8	25	30	31	7.58	+ 2.45	1.20	0	15	12	5	13	.....	U. S. Forest Service.
Weitchpec	Humboldt	1,700	3	46.0	.....	67	2	29	30	24	15.43	.....	3.95	T.	17	6	9	15	se.	M. E. Lathrop.
Westley**	Stanislaus	90	24	55.6	− 1.1	70	6	30	24	....	2.98	+ 1.83	0.63	0	9	2	0	28	.....	S. P. Co.
Wheatland	Yuba	84	26	52.4	− 0.2	70	6	32	22	22	5.96	+ 3.51	1.95	0	13	11	3	16	n.	Wm. Lumbard.
Willows	Glenn	136	34	52.8	− 2.0	75	7	31	21	30	7.11	+ 5.15	3.12	0	15	14	3	13	n.	E. C. Mills.
Yorba Linda	Orange	.....	....	60.8	.....	92	8†	37	30	40	2.38	.....	1.25	0	6	16	6	8	w.	S. J. Walker.
Yosemite	Mariposa	3,945	9	42.0	.....	79	9	17	22	52	3.41	.....	0.73	1.0	12	11	3	16	s.	J. P. Kelly.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 11, California.*

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon.																																
Chiloquin	Klamath	.18			.12	1.14	.35				.03	T.	T.				T.	T.	.27	.01	.39	.05	.03	.01		.03	T.	.15	.05	.05		2.85
Klamath Falls	do	.50			T.	.52	.34				.05		T.						.16		.19							.18		.05		1.99
Lakeview	Pitt	.60	.01		T.	.38	.04	.01			.08	T.	.04						.22	T.	.16	T.						.02		.06		1.62
Merrill	Int. drainage	.73					.26												.25		.20											1.44
Vistillas	Pitt	.64				.04	.65				.10								.60		.37									.01		2.41
Yonna	Int. drainage	.62				.62	.15				T.		T.					.06	.20	.20	T.					T.			T.	.24		2.09
California.																																
Aguanga	Coast												.20	.50						.42	.14											1.26
Alturas	Sacramento	.42			.15		.01					.15	.05						.28		.28							.22		.03		1.59
Angels Camp	San Joaquin	1.21			.50							.36		.76	.22				1.01	.09						.06						4.27
Angiola	do		.55											.15	.02				.50											.46		1.68
Antelope Valley	do													.44	.14					.38											.18	1.14
Antioch	do	.08	.80	.66	.07						.10	.29	.52						.08	.82	.25							.21		.34		4.22
Aptos	Coast		.42		.52	.33						.18	.40	.68					.17	1.55	.26					.26	.33			.16	.22	5.48
Arrowhead Springs	do	.90										.10	1.28						1.24	.63	.05									.18		4.38
Auburn	Sacramento	.09	.84		.10	.06	.05					.09	.23	.18	.02					.65	.11	.06				.10		.46		.36	.12	3.52
Avalon	Ocean		.03										.06	.22	.04				.09	1.13												1.57
Azusa	Coast		.42										1.29	.45					.89	.44	.07									.14		3.70
Bagdad	Desert																															0.00
Bakersfield	San Joaquin		T.											T.					.31									T.		.61		0.92
Barstow	Desert		.10										T.	.20						.48										T.	T.	0.78
Bear River	San Joaquin																															
Bear Valley	do		1.07																		.70									1.26	3.62
Bear Valley Dam	do		.22									.08	4.10						1.40									.59			.90	6.70
Beaumont	do	.28											1.39						.88	.55	.13											3.23
Beaumont (near)	do	.50										.50	1.70						.81	.82	.19											4.07
Belotta	do	.52			.05	.50						.15	.10	.35	.03				.05	.87	.10					.05		.45	.15	.25		3.62
Ben Lomond	Coast	.60			.45						.35	.93	1.41	T.				.90	3.10	.25					.70	.12	1.77		.42			11.00
Berkeley	do	.89	.02	.02	.36	.01	.08	T.			.13	.14	.35	.15					1.40	.01	.59					.21	.01		1.00		.46		5.83
Betteravia	do	.15											.78	.24					.95							.04	.07			.09		2.32
Biggs	Sacramento	.10	1.00		.04	.01						.76	.11					.91			.23					.10		1.00		.70		4.96
Bishop	Owens												.26		T.					.30									T.		T.	0.56
Bishop Creek	do											.20	.10	.20						1.20									.20			2.10
Blocksburg	Coast	1.03			.71	1.25	.40						.10	.15				1.64	.55		.73	.12			T.	.51	.50	.75	1.22	1.28	.15	11.09
Blue Canon	Sacramento	.26	1.34	.46	.35	1.32						1.78	1.38	.50	.30					.20	.30	.50				.48	.12	1.75		.36	.05	11.39
Blythe	Desert		T.										T.			.36				.62				T.	.10							1.08
Boulder Creek	Coast	.12		.31	.15	.19					.25	.70	1.50						.92	2.35	.37					.95		1.32		.34		9.47
Bowmans Dam	Sacramento	1.25			1.00	1.05					1.35	.95		.42					.20		1.80				.70		.25	1.95		.20		11.12
Branscomb	Coast	1.75			.65	2.03	1.13					.30	.07					1.08	.58	.67					T.	.45	1.30	1.05	.03	1.25		12.34
Brawley	Desert															.15			.10													0.25
Burney	Sacramento	.85	.10		.10	T.	.07					T.	.08					T.	1.18	T.	.19	T.				.10	.25	1.00		.37		4.29
Butte Valley	do																															
Cahuilla	Coast		.50											.70		.01				.60	.50	.05									.22	2.57
Calexico	Desert																			.02												0.03
Caliente	San Joaquin	.40																		.35	.20	.23									.75	1.93
Calistoga	Coast	.50	.77		.38	.43							.52	.10					2.00	.20	.16				.03	.04		1.00		.02		6.15
Campbell	do	.29		.35							.02	.05	.28						1.15		.10				.05		.38			.37		3.04
Campo	do		.09											.60						*	*	1.25								.45		2.39
Camptonville (near)	Sacramento	2.40	.93		.24	.75	.49					1.35	.09	.34					1.69	.02	1.28					.35	.21	1.77		1.18		13.09
Cedarville	Mountain Lakes	.67	.04		.05	.04	.02				.07	.12							.33		.32							T.	.03	T.		1.69
Chester	Sacramento	.85	.05		.27	.65	.27			T.		.55	.28						.40	.30						.29	.27	.40		.80		5.38
Chico	do	1.28	.14		.50	.06						.20	.16	.20					2.62		.05					.50	.30	.73		.53		7 27
Chico (near)	do	1.44			.51	.05						.26	.28					*	2.71		.06				*	*	1.69		T.	.65		7.65
China Flat	Coast	T.		.19	.73	2.25					T.	.09	T.					1.16	T.	.49	.47				.08	.38	1.43	.10	1.01	.58		8.96
Chino	do																			1.31												1.31
Cisco	Sacramento																															
Claremont	Coast		.53										.07	.98	.09				.01	1.35	.07	.05					T.		.01		.07	3.23
Cloverdale	do	1.30	T.		.56	.20	.28					.31	.40					.03	2.31		.16				.10	.63	.72	1.50	T.	.80		9.30
Coalinga	San Joaquin		.48											.63	.32					.18											.21	1.82
Colfax	Sacramento	.15			.50	.80						.75	.50	.25	.20					.98	.42	.23			.17		.21	1.08			.60	6.84
Colgate	do	.43	2.37		.16	.05	.40					.42	.34	.30	.03				.02	.99	.40	.03				.19	.03	.75	.03	.40	.35	7.69
Colusa	do	.46	.81		.39	.06							.25	.13					1.71	.56	.08					.09	.05	.50		.45		5.54
Corning	do	.65	.84	.22	.08	.03					.02	.08	.32												.13		.45		.34			3.16
Corona	Coast																															
Cuyamaca	do		.30	.48										1.90	.04					1.07	.60	.15									.32	4.86
Davisville	Sacramento	.75			.45							.35	.07	.14					1.74	.26	.09					.07		.32		.39		4.63
Deer Creek	do																															
Del Monte	Coast	.24	.18		.50								.50	.66					.37	.08	.11					.19		.22		.37		3.42
Delta	Sacramento	.50		.32	1.21	1.51					.49	.50	.10					1.90		.12				.80		1.90			.51			9.86
Denair	San Joaquin				.51								.26						.48									.18		.35		1.78
De Sabla	Sacramento	2.05	.25		.56	.25	.37					1.17	.25	.20					2.90	.10	.68					1.35	.73	2.10		1.10		14.07
Descanso	Coast				.23									1.22						1.85											.12	3.42
Devils Canon	do		.93									.02	.30	1.27						.46	.26	.03									.12	3.39
Dinuba	San Joaquin																															
Dobbins (near)	Sacramento	1.83	1.22		.17	.33	.17					.78	.06	.28					1.12	.01	.46					.18	.18	.67		.73		8.19
Downieville	do	1.20	.45		.33	.51	.24				.02	1.68	.59	.41	.02				1.13	.04	.80	.27				.65	.28	1.36		.56		10.54
Dudley	San Joaquin	.20	.10										.12	.08	.05					.30								.07		.25		1.17
Dudleys	do	.50	.17		.08	T.					T.	.21	.50	1.08					.78	.30	.28				T.	.09		.73		.29		5.01
Dunlap (near)	do	1.31			.01						.12		.89	.46	.01				1.14	.38	.13					.02	.11	.10		.55	.07	5.30
Dunnigan	Sacramento	.37	.52		.28	.01	.03					T.	.52	.23					1.78	.65	.08					.04		.53		.39		5.43
Dunsmuir	do	.90			.28	.60	1.46	.01				.04	.26	.05					1.59	.16	.09	.09				.82	1.44	1.88		.38		10.05
Durham	do	1.56			*	.56							.30		.29			*	.06		T.				*	.77	.80		*	.62		4.96
East Park	do	.65	.38		.31								.33	.36					1.74	.24						.25		1.00		.15		5.41
Edgewood	Sacramento	.51	.02						.04										.36	.12	.04					.09	.03	.65		.12		1.98
Edison	San Joaquin	.04	.19										.05						.59	.07									.41		.56	1.91
El Cajon	Coast	.29	.06										.08	.90						1.15	.20										.15	2.83
Electra	San Joaquin	.36	.08		.20	.04						.41	.37	.54	.02				.52		.31					.17		.65		.48		4.15
Emigrant Gap	Sacramento	.27	.76		.30	.20	.67	.06			.90	.20	1.40	.26	.27				T.	.30	.40	.40				.20	.70	1.29		.10		8.68
Escondido	Coast		.20										.27	.80					.07	1.01	.12										.07	2.54
Eureka	do	.28		.29	.01	1.15	.01			.04								.46		.44	.35	.05				.36	.74	.07	.70	.34		5.29
Fairmont	do																															
Farmington	San Joaquin	.41			.57			.15					.32	.07					.52	.33							.41			.18		2.96
Felton	Coast	.19	.33		.24	.25						.27	.98	1.19					.67	2.73	.29					.48	.05	1.21		.32		9.20
Firebaugh	San Joaquin		.43			.11							T.	.76	.10					.37		.04				T.					.12	1.93
Folsom	Sacramento		.88		.35	.20	T.			T.	T.	.15	.29	.25	.03	T.			.05	.88	.55	.03				.18		.45		.33	.30	4.92
Fordyce Dam	do	.90	.36		.65	.46	1.22				.38	2.30	.65	.30	.15				.50	T.	.90	.38			.04	.76	.32	1.85		.45	.05	12.62
Fort Bidwell	Mountain Lakes																															‡2.41

TABLE 2.—*Daily precipitation for November, 1913. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
California—Contd.																															
Fort Bragg	Coast		.92	.12	.60	.72						.32						1.40	.30	.32	.12	.10			.32	.95	.35		.57	.23		7.34
Fort Ross	do																														
Fouts Springs	Sacramento																														
Fresno	San Joaquin	.58			.01						T.	T.	.18	.12	T.				.68		T.					.02		.08		.19		1.86
Friant	do		.40				.05					.06	.03	.54	.10					1.09						.07		.06		.15		2.55
Galt	do	.87			.45							.06	.08	.18	.11			.07	.75		.31					.14		.50	.34	.27		4.13
Georgetown	do	1.05				.54						.68	.30	.30						.86	.55	.12				.30		.89		.55		6.14
Gilroy	Coast		.24		.25							.12	.04	.53	.22					.82	.09							.53		.09		3.28
Gilta	do	.53				2.52	1.10											1.25			.85					.45	.70	1.21	.06	1.25		9.92
Glenn Ranch	do		.18										.38	1.49	.15					2.62	.10										.06	4.98
Glennville	San Joaquin	*	.73										.23	.06					.82	.18	.08							.42		1.33	.30	4.15
Glenwood	Coast	.18	.41		.21	.28						.22	1.20	.63	.05				.70	1.87	.20					.58		1.37		.30	.15	8.35
Gold Run	Sacramento	.40	1.52		.32	.20	.63					.70	.92	.29	.03					.88	.60	.38				.76	.05	1.56		.05		9.29
Gonzales	Coast		.64	.20	.07							.13	.76	.08					.80		.02							.14			.17	3.01
Grass Valley	Sacramento	1.82	.56		.30	.35	.25					1.06	.29	.25					1.26	.04	.66					.30	.20	1.15		.65		9.14
Greenland Ranch	Desert																														
Greenville	Sacramento	.59			.25	.18						.35	.33	.60					.79	T.	.48	.12				.43	.26	1.33	T.	.50	T.	6.21
Gridley	do	.40	.95		.38	.01	.01						.65	.13					1.15	.75	.15					.20		.98		.69		6.45
Groveland	San Joaquin																														
Guinda	Sacramento	.52	.62		.42	.01						.55	.12	.12				1.85	.48							.11						4.80
Hanford	San Joaquin																														
Head Dam	Sacramento	2.43	1.04		.26	.48	.40					1.12	.11	.35					1.20	.03	1.00	.03						.19	.85		.74		10.23
Healdsburg	Coast	.64	.67		.32	T.	.25					.26	.58	.14					2.00	.30	.11	.05				1.54	.24	1.96		1.14		10.20
Hearst (near)	do	1.00	.50		.85	.75						.31						1.07	.90	.30						1.05	1.07			.60		8.40
Heber	Desert																														
Helen Mine	Coast	2.90	.12		.36	.67	.36					.60	.75	.03	.07				3.53		33					3.65	1.30	3.63		.99		19.29
Hetch Hetchy	San Joaquin	.26	.21		.19	.01	.01					.57	.25	.45	.05				.31	.59	.47	.09				.14	.04	.71		.44	.06	4.85
Holcomb	Coast		T.									.14	.10	.80			.06			.68	.15										.45	2.38
Hollister	do		.35		.20	.27						.96	.21	.39	.10					.90	.04	.10						.16			.18	2.96
Hornbrook	Klamath	.45		.18							.90						.10								.25	.75	.03	.01		.82	.06	3.55
Hot Springs	San Joaquin	.55	.80										.21	.33					.93	.06	.39							.34		1.06		4.67
Hullville	Coast	1.26	.02	T.	.36	.93	.37	.01				.34	.65	.02				.33	.25		.28	.01			.01	.65	1.26	1.20	.02	.84	.01	10.22
Hyampon	do	.80		T.	.31	1.63	.69					T.	T.					.84	.60		.32					.25	.50	.25	.75	.26		7.20
Independence	Owens		.02									T.	.01	T.	.01				.36	.54										.01		.95
Indian Wells	Desert																														
Indio	do												T.							.07												.07
Inskip	Sacramento	2.07	.01		.58	.43	.32			.05		.90	.20	.23					2.23		1.24					1.93	.83	2.50		1.10		14.62
Ione	San Joaquin	.31	.33		.11	.42						.33	.28	.56	.05					.80	.30	.07				.02		.57		.05	.25	4.45
Jacksonville	do	.32					.06							1.00	.28					.97	.08	.04				T.	.06	.50		T.	.27	3.58
Jamestown	do	.40			.14			.30			.13	.13	.60	.85					.80	.45							.05	.65				4.50
Jenny Lind	do	.45			.35							.15								.70	.40				.15	.11		.41		.35		3.07
Jolon	Coast	.28			.14								.47	1.88	.04				.16	.82						.12		.14		.18		4.23
Julian	do		.13		.30								.08	1.74	.13					.68	.58	.16									.28	4.08
Kennedy Mine	San Joaquin																														‡4.43
Kennett	Sacramento	1.21		*	*	3.10						*	.52					*	2.47	*	.22				*	*	4.39		.63		12.54
Kentfield	Coast	2.70			.67							.83	.81	.30					3.07	.27	.38				.20	.58	.11	1.32	.83	.77		12.84
Kernville	San Joaquin	.14											.08		.10				.63										.07		1.02
King City	Coast	.20				.18								1.28					.04	.41								.04	.13			2.28
Knights Landing	Sacramento	.34	.51		.28	.13						.07	.43	.10	.20				.60	1.04	.13					.12		.68		.58	T.	5.21
La Grange	do	.27	.07		.09								.63	.34					.84	.07	.12							.34		.26		3.03
La Jolla	Coast		.20										.59	1.03					.08	.88	.55	.08										3.41
Lake Eleanor	San Joaquin																														
Lakeside	Coast																														
Lake Spaulding	Sacramento		1.21		.75	.45	.28				.10	2.35	.50	.25	.20				.60		1.40					.60	.20	1.75		.45		11.09
La Porte	do	1.50	.50		.40	.70	.70					.50	.25	.65					1.33	.04	.94	.15				.57	.57	2.12		.58		11.50
Lathrop	San Joaquin	T.	.67		.05	.22						.18	.06	.08	.03				T.	.46	.22					.10		.16		.05	.37	2.65
Laurel	Coast	.25	.67		.37	.20							1.19	.57					.77	1.36	.27	.10			1.00			1.45		.62		8.82
La Grand	San Joaquin	.68											.89	.20					.78									.25		.28		3.58
Lemon Cove	do	*	1.05							T.			.80						.82		.02							.07		.45		3.21
Lick Observatory	Coast		.60				.82								1.32							1.52						.76			.32	5.34
Livermore	Coast	.30	.29	.01	.35	.01					.01	.08	.13	.09					.33	.16	.12				.02	.12		.18		.27		2.47
Lone Pine	Owens																			.41										T.		0.41
Long Valley	Mountain Lakes																														
Lordsburg	Coast	.40											1.12							1.50	.08									.10		3.20
Los Alamos	do	.10											.30	.95	.05				.75	.20								T.		.10		2.45
Los Angeles	do	.03	.10										1.12	.14					1.50	.09								T.		.02		3.00
Los Banos	San Joaquin																														
Los Gatos	Coast	.20	.23		.29		T.					.48	.57	.36					1.80	.40	.15					.50		1.12		.45		6.49
Los Molinos	Sacramento																														
Lowe Observatory	Coast	T.												2.00						2.00												4.00
McCloud	Sacramento	.84	.05		.45	.90	.22					.31	.14					.37	1.32		.20					1.50	1.70	1.09		.42		9.60
Macdoel	Klamath	.75			.02		.04											.05								.02						0.88
Madeline	Mountain Lakes																														
Magalia	Sacramento	.10	1.00		.40	.15	.45					.20	1.10	.40					1.30	.01	.40	.10				1.08	.90	2.20		.92		10.71
Mammoth Tank	Desert											.45				.20				.25												0.90
Maricopa	San Joaquin		.03	T.									.12							.10											.40	0.65
Mariposa	do		.54									.23	.33	.87	.31					1.00	.08					.08		.37			.33	4.14
Marysville	Sacramento	.41		1.32	.20	.09						T.	.55	.16				.36	1.50	.11					.12	.02	.46	.47	.13			5.90
Mecca	Desert													T.			.10			.10												0.20
Melones	San Joaquin		.33			.36							.23	.76						1.14	.16	.07				.12		.60			.22	3.90
Menlo Park	Coast	.45			.40	.50						.30	.60						.80	.15	.20				.26		.40		.46		4.52
Merced	San Joaquin	T.	.23			.09									.28	.72					.78					.08		.21			.30	2.69
Merced Falls	do		.28			.05	T.					.03	.02	1.05	.27				.73		.07						.02	.10	.09		.20	2.91
Mesa Grande	Coast																														
Middlewater	San Joaquin	.31											.15					.04			.01								.16	.26		0.93
Mill Creek No. 1	do	.33			.39	.07	.14					.79	.34	.50	.06				.87	.37	.47					.43		.99		.37		6.12
Mill Creek No. 2	Coast		.70									.03	1.31	.24					.22	1.64	.28									.22	.02	4.66
Mills College	do	1.10	.31	.02	.62	.06	.19				.04	.31	.26	.08					1.10	.02	.60					.27		.66		.41		6.05
Milo	San Joaquin		1.00									T.	.55							.92											1.20	3.67
Milton (near)	do	.45			.38			T.			.18	.22	.28	.13					.64		.36				.09			.45		.40		3.58
Modesto	do	.72			.62						.25		.42	.32					.55		.15						.24			.41		3.66
Mojave	Desert												.01	.02					.01													0.04
Mokelumne Hill	San Joaquin	.53			.22	.06					.20	.23	.52	.03					.60	.20	.06				.16		.65			.50		3.96
Mono Ranch	Coast		.24										.94	3.10	.49				1.53	.48										.07		6.85
Montague	Klamath	.53		.05		.27	.12			T.			T.					.09	.35		.15					.02		.21	T.	.12		1.01
Monterey	Coast	.45			.53						.05		.28	.84	.11				.50	.13					.15			.28		.39		3.71
Monterio	San Joaquin																														
Montgomery Creek	Sacramento	1.30	.70		.43	1.00	1.58						.28						1.95		1.00					.50	.53	1.00		.70		10.97
Mount Tamalpais	Coast	.89		.01	.18	.07	.05				T.	.49	.81	.15				.03	2.09	.02	.34				.17	.17	.49	.01		.59		6.56

TABLE 2.—*Daily precipitation for November, 1913. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
California—Contd.																																
Mount St. Helena	Coast																															
Napa City	do	1.40			.41	.11						.65	.19	.06					1.90	.33						.25	.58		.50			6.38
Napa (S. H.)	do	.92		.36	.05		.12				.11	.63	.11	.03				1.19	.49	.09	.01				.17		.51		.43			5.22
Needles	Desert		.26														.14			1.18					.20							1.78
Nellie	Coast																															
Nevada	Sacramento	1.66	.39		.32	.36					T.	1.01	.23	.38					1.41	.03	.59					.35	.17	1.06		.52		8.48
Nevis	do	.53	.02		.23	.36	.07					.47	.12	.48					.71	.03	.20				.01	.19	.46	.92	.62				5.42
Newhall	Coast												.55	.95					1.30													2.80
Newman	San Joaquin	.36			.43	.05						.15	.52	.58	.05				.57	.31	.02							.13		.37		3.54
North Bloomfield	Sacramento	1.45	.77		.30	.40						1.47	.30	.40					1.20		.55					.40	1.15			.40		8.79
North Fork	San Joaquin		.44			.02						.33	.05	.85	.37					1.10	.37	.03				.04		.29		T.		3.89
North Lakeport	Coast	.72		.20	.23	.25						.35	.03					1.00	1.34	.12	.07				.25		1.11		.55			6.22
Oakdale	San Joaquin	.29			.12	.65						.08	.15	.44	.22				.03	.50	.21					.07		.34			.39	3.49
Oak Grove	Coast																															
Oakland	do	.58	.65	T.	.37	T.	.05				.10	.10	.62	.14					1.26	.05	.35				.13	.02	T.	.87		.39		5.68
Oakville	do	.35	.50			.34	.15						.75	.35					1.75	.84	.20					.56	.03	1.20		.50		7.52
Oceanside	do	.12											.70	.06					.86	.13	.10							.03				2.00
Ojai Valley	do		.30									T.	1.66	1.12					1.30	T.	.08									.02		4.48
Orland	Sacramento	.76		.28	T.	.03					.02	.11	.21					2.29	.46	.01	T.				.09	.03	.51		.32			5.12
Orleans	Klamath	.02		.34	.50	2.49	.05					.03					.13	.54	.54			.04			.09	.40	1.17	.12	1.37	.16		7.99
Oroville (near)	Sacramento	1.95		.39	.05						.08	.90	.14					1.12	.52	.12					.15	.03	1.33		.67			7.45
Ozena	Coast	.05											1.03	.05					.95	.11											.05	2.24
Palermo	Sacramento		1.50	1.00	1.00	1.00												1.50	1.00													7.00
Palm Springs	Desert												T.							.10												0.10
Parkfield	Coast	.46	.30										.42	.90	.70				1.24	.20								.26		.25		4.73
Pasadena	do		.27										.33	.67	.05				.45	1.42										.01		3.20
Paso Robles	do		.14											1.32	.34					.85						.02	.05				.30	3.02
Peachland	do	1.25	.01	.01	.50	.14	.10					.60	.25	.04				.17	2.60	.02	.15				.20	1.39	.23	1.19		.77		9.62
Petaluma	do	.52	.01	.48		.11	.12					.26	.47	.03				.01	2.80	.01	.09				.08	.30	.03	.75		.63		6.70
Phoenix Dam	San Joaquin																															
Pilot Creek	Sacramento	1.08	.08		.40	.38	.21				.10	1.72	.48	.37					.84		1.03	.15						*	*	2.35		9.19
Pinchot	Coast																															
Pine Crest	do		.25									T.		2.85	.47				1.82								T.			T.		5.39
Placerville	Sacramento	.04	.47		.08	.28	.12				.03	.60	.55	.45	.08					.70	.38	.03				.24		.75		.20	.24	5.24
Point Lobos	Coast	.82			.48	.04	.03				.03	.45	.66	.16					2.30		.13	T.				.23		.48		.30		6.11
Point Loma	Coast		.27	.04		T.	.01					.01		.3)		.01	T.	.01	.01	1.13	.05	.06	.01			T.	T.	.01	.09	.01		2.02
Point Reyes	do	.35	.01	.35	.33	.21	.05					.19	.63	.03				.33	.99	.02	.16				.19	.05	.47	.01		.22			4.59
Pomona	do		.44	.01									.30	1.50	.24					1.32	.04	.05										.12	4.02
Porterville	San Joaquin	.03	.65										.25	.05					.81												.39	2.18
Priest Valley	Coast	.63				.22							.11	1.49	.86	.03				1.23							.15		.14		.15	5.01
Quincy	Sacramento	.50	.10				.10				.95		.73						.75	.10	.37	.40				.45	.40	1.40		.50			6.75
Red Bluff	do	1.37			.19	.01	.11					.17	.10	.04				.47	1.87		.06				.11	T.	.50		T.	.34			5.34
Redding	do	.92	.61		.20	.25	1.20	.02				.13	.16	.09				*	1.20	.33	.16	.09			*	.21	.10	1.06		.64			7.37
Redlands	Coast		.38										.09	.50						1.45	.35										.05	2.82
Reedley	San Joaquin	.41											.27	.23					.97											.32		2.20
Represa	Sacramento	.92		.38	.22						.23	.33	.30					.07	.25	.60					.22			.25				3.77
Rialto (near)	Coast	.14	1.19								T.	.02	1.40	.05					1.26	.80	.14									.04		5.04
Rio Vista	Sacramento	.12	.87		.61	.21						.40	.15	.22	.05				.11	1.00	.18					.07		.35		.32	.02	4.68
Riverside	Coast		.39	.05									.61	.42						.79	.11										.01	1.78
Rocklin	Sacramento		.95		.21	.10						.28	.45	.28					.17	1.06	.43	.03				.10		.04		.26		4.39
Rohnerville	Coast	.80		T.	.18	1.13	.47	T.				T.	.05						.06		.62	.04				.48	.42	.81	T.	1.21			6.27
Ruth	do	1.58	.01		.55	1.01	.30					.11	.04	.01				1.20	.52	.50	.10				.75	.14	1.20		1.54			9.56
Sacramento	Sacramento	.64			.44						.12	.13	.07	.21					1.61		.24				.17		.28	.12		.55		4.58
St. Helena	Coast	.09	.03	.28	.01	.12	.02				.31	.52	.21					2.56	.16	.17					.67	.01	1.17		.55			6.88
Salinas	do		.33	.18	.19							.15	.04	.21	.05					.46	.16				T.			.26		.26		2.29
San Bernardino	do		.55									.03	.20	.40						1.14	.15										.07	2.54
San Diego	do	.01	.26										.46	.22					.50	.70	.02	.06										2.23
San Francisco	do	.74			.51	.02	.01				.07	.36	.79	.04					2.21	T.	.17				.15	.03	.55	.21		.36		6.22
San Jacinto	do													.77						1.12	.20										.04	2.13
San Jose	do	.18	.03		.43						.08	.14	.52	.03	.01				1.58	.15	.16				.04		.08	.28		.39		4.10
San Luis Obispo	do	.51	.13									T.	.60	1.02	.04				1.01	.29						.12		.14		.11		3.97
San Mateo	do	.40	.70		.45	.05	.04					.15	.23	.66					.40	1.28	.15					.23		.35		.40		5.49
San Miguel	do		.24			T.								1.42	.11					.53							.05				.23	2.58
San Miguel Island	Ocean		.10										.26						.45	.10						.16				.11		1.18
Sanger	San Joaquin																															
Santa Ana River	Coast		.66										1.65	.52					.33	1.94	.13									.34	.05	5.62
Santa Barbara	do	.30									.02			1.91	.05				.05	1.10						T.						3.43
Santa Clara	do	.31	.03		.47	.08	.01				.01	.18	.38	.15					.95	.40	.21					.12		.38		.46		4.14
Santa Cruz	do	.45	.05	.35	.25						.25	.85	.90	.07				.27	.95	.30						.27	.35		.47			5.78
Santa Margarita	do		.37											1.51	.53					1.00						.02		.09		.17		3.69
Santa Monica	do			.19									.24	.21						.99										T.		1.63
Santa Rosa	do	.28		.82	.42	.02	.32					.43	.10	.08					2.60	.08	.15					.55	.07	.95	.63				7.50
Sausalito	Coast	.40	.87	.20	.07		.23					.20	.16	.25				1.50		.70	.16					.13		.65		.32			5.84
Selma	San Joaquin	.53										.28	.20	.12					.80								.19			.07			2.19
Seven Oaks	Coast	.26									.08		1.30					.60	.80	.53										.50	.03	4.10
Shively	do	.75		.10	.09							.35		.04				.99	.15		.45	.05				1.04	1.18	1.27		1.15			7.61
Sierra Madre	do	.32											*	1.20	.38				1.16	.24	.02											3.32
Sierraville	Mountain Lks.					T.					.11	1.00	21	.68	.08				.17								.95		.10			3.30
Sisquoc Ranch	Coast	.23											.69	.21					.90										.15	.10		2.28
Sisson	Sacramento	.16			1.00	.50					.40							1.40	.20					.65	.82	1.50		.80	.20			7.63
Soledad	Coast	.24	.67			.14								1.36	.10					.85												3.36
Sonora	San Joaquin	.10	.35		.11	.01					T.		.50	.78					.78	.25	.18				T.	.09		.68		.24		4.07
S. E. Farallon	Ocean																															
Spreckels	Coast		.31		.28	.08						.11	.06	.24	.01					.66	.05					.03		.20			.25	2.28
Springville	San Joaquin		2.25	.13									.30	.40	.30				1.08	.60	.30							.50	.27			6.05
Squirrel Inn	Coast		1.21										1.63	1.75					T.	2.48	.53										.10	7.70
Stanwood	Sacramento	1.93				.97	.33					1.24	.23	.37					2.24		.62					.74	.54	2.54		1.12			12.87
Stirling City	do	.15	1.85		.65	.20	.90					1.20	.38						1.50	.40					1.50	.70	2.85		.85			13.13
Stockton (S. H.)	San Joaquin	.26	.43		.33							.37	.03	.07	.03				.60	.07	.29					.05		.18		.43			3.14
Storey	do	.77																												.28		1.05
Suisun	Sacramento	.32	1.00	.03	.42	.07	.18	.05				.12	.54	.11	.17				.80	.81	.09					.05		.34		.39			5.49
Sulphur Banks	do	1.10			.42	.70	.65					.35	.45						1.75							.60	.10	1.00		.60			7.72
Summit	do	.25			.20	.20	1.00					2.10	.20	.40	.20				.30	.20	.50	.20			.05	.60	.30	.50		.30	.20		7.70
Susanville	Mountain Lks.	.19			.08						.10	.12	.08						.35	.12								.50					1.55
Tamarack	Sacramento	.10			.40	.10	.20				.35	.75	.16	.18	.20				.38	.50	.86				.08	.75	.28	.54		.26	.26		6.35
Tehachapi	San Joaquin																	.48	.08										.20			.76
Tehama	Sacramento	1.40			.02	T.	T.					T.	T.	T.					1.00	.90	T.					T.	T.	1.02	.04				4.38
Tejon Rancho	San Joaquin																															
Three Rivers	do	.05	1.10			T.	T.					.06	.48	.13	.40					.92	.08					T.		.13		.40	.13	3.88

TABLE 2.—*Daily precipitation for November, 1913. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
California—Contd.																																
Towle	Sacramento	.02	1.20	....	.30	.20	.85	....	....	....	....	1.00	.87	.32	T.	....	....	....	....	.81	.84	.48	....	....	....	.50	.07	1.00	....	T.	.20	8.66
Tracy	San Joaquin	....	.55	.22	.19	.03	....	....	....	....	....	.15	.13	.15	.01	....	....	....	.59	.31	....	....	....	....	....	.03	....	....	.12	.08	....	2.56
Tulare	do	.16	.74	....	....	....	....	....	....	....	....	T.	.15	.15	....	....	....	....	.64	....	....	....	....	....	....	.02	....	....	....	.33	....	2.19
Tustin (near)	Coast	....	.24	....	....	....	....	....	....	....	....	....	.06	.49	.02	....	....	....	*	.73	....	....	....	....	....	....	....	....	....	....	....	1.54
Ukiah	do	1.10	....	....	.37	.60	.17	....	....	....	....	.30	.04	....	....	....	....	.24	2.46	....	.28	....	....	....	.07	.18	.42	1.32	....	.83	....	8.38
Upper Lake	Sacramento	1.23	.03	....	.43	.28	.19	....	....	....	....	.26	.01	....	....	....	....	T.	2.26	....	.13	....	....	....	T.	.25	.44	1.02	T.	.63	....	7.16
Upper Mattole	Coast	.79	.03	....	.42	.78	2.02	....	....	.01	T.	.01	.13	.01	....	....	....	.57	.72	.04	.49	.21	.01	T.	....	.47	2.37	2.25	.03	1.43	.13	12.92
Vacaville	Sacramento	1.12	....	.35	.06	....	....	....	....	....	....	.10	.55	.21	.20	....	....	....	.77	1.03	.12	....	....	....	....	.12	.65	.34	....	....	....	5.62
Valley Springs	San Joaquin	.51	....	....	.40	....	....	....	....	....	....	.25	.29	.33	....	....	....	....	.65	....	.44	....	....	....	.25	....	.44	....	....	.46	....	4.02
Visalia	do	....	.73	....	....	....	....	....	....	....	....	....	....	.20	....	....	....	....	....	.92	....	....	....	....	....	....	....	....	....	.23	....	2.08
Warner Springs	Coast	....	.03	....	....	....	....	....	....	....	....	....	.05	.68	....	....	....	....	.37	.20	.11	....	....	....	....	....	....	....	....	.08	....	1.52
Wasco	San Joaquin	....	....	....	....	....	....	....	....	....	....	....	....	.20	....	....	....	....	....	.35	....	....	....	....	....	....	....	....	.02	....	.57	1.14
Watsonville	Coast	.31	.02	.41	.38	....	....	....	....	....	.09	.15	.75	.02	....	....	....	.12	.91	.16	.08	....	....	....	.13	....	.27	....	.12	.27	....	4.19
Weaverville	do	.64	....	....	.35	1.20	.44	....	....	....	....	.06	.07	....	....	....	....	.68	.83	....	.39	.06	....	....	....	.27	.61	1.10	.02	.86	....	7.58
Weitchpec	Klamath	.41	....	....	.50	3.95	2.10	.13	.01	....	.03	.09	T.	....	....	....	....	.85	.13	T.	1.50	.32	....	....	....	.72	.69	1.53	.08	2.39	....	15.43
West Branch	Sacramento	2.00	.04	....	.51	.47	.56	....	....	....	....	.92	.23	.22	....	....	....	2.20	T.	.99	T.	....	....	....	....	1.21	.61	2.05	....	.83	....	12.84
Westley	San Joaquin	.20	....	....	.63	....	....	....	....	....	....	.12	....	.50	.20	....	....	....	....	.72	....	....	....	....	....	.20	....	....	.20	....	.21	2.98
West Point	do	.45	....	....	....	.29	.15	....	....	....	....	.46	.49	.53	.10	T.	....	....	....	.86	.29	.09	....	....	....	.25	.03	.66	....	....	.36	5.01
West Saticoy	Coast	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wheatland	Sacramento	1.27	.34	....	.30	.01	....	....	....	....	T.	.36	.08	.12	....	....	....	....	1.95	....	.18	....	....	....	....	.18	.06	.43	T.	.68	....	5.96
Willows	do	1.62	.15	....	.26	.02	....	....	....	T.	....	.11	.30	.02	....	....	....	.04	3.12	.02	.02	....	....	....	....	.13	.10	.90	T.	.30	....	7.11
Yorba Linda	Coast	....	.25	....	....	....	....	....	....	....	....	....	.12	.57	.14	....	....	....	....	1.25	.05	....	....	....	....	....	....	....	....	....	....	2.38
Yosemite	San Joaquin	.13	.30	....	....	....	....	....	....	....	....	.73	.33	.28	.01	....	....	....	.19	.63	.25	....	....	....	....	.03	*	.43	....	.10	....	3.41

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																							
			Alturas.		Barstow.		Brans-comb.		Brawley.		Colusa.		Eureka.		Fresno.		Independ-ence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porter-ville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	56	39	54	38	84	61	56	49	87	51	.....	.....	56	50	68	56	65	40	71	54	53	50	56	48	74	49	62	56
2....	49	33	55	41	81	66	67	40	85	62	.....	.....	51	48	66	54	64	44	69	58	52	47	68	44	66	56	70	53
3....	53	22	57	20	79	56	63	40	83	60	.....	.....	68	49	69	47	61	36	71	58	53	44	63	35	76	52	62	49
4....	53	35	55	35	77	50	62	39	82	49	.....	.....	59	44	67	50	62	33	72	52	49	44	52	40	72	46	59	53
5....	44	36	47	38	80	55	63	39	82	45	.....	.....	60	52	61	51	62	33	72	52	55	44	52	44	65	52	57	55
6....	46	37	53	43	79	56	67	50	85	45	.....	.....	61	53	67	49	69	37	77	54	57	51	69	42	57	42	64	56
7....	66	36	73	31	84	58	66	40	89	47	.....	.....	61	51	72	57	76	40	87	56	68	55	79	38	74	47	78	52
8....	65	36	71	33	84	56	68	40	89	54	.....	.....	59	49	79	50	75	46	92	65	70	58	82	41	85	47	71	52
9....	55	41	62	36	86	57	68	40	90	52	.....	.....	61	52	76	50	71	37	90	65	64	53	70	39	80	45	63	50
10....	49	38	57	42	85	58	67	38	83	50	.....	.....	55	44	72	52	74	40	78	58	54	42	61	45	75	47	58	52
11....	47	25	53	23	80	62	65	35	83	55	.....	.....	56	44	70	50	65	51	67	59	48	43	47	40	72	56	54	48
12....	49	27	48	28	68	58	68	35	86	60	.....	.....	56	42	65	49	58	36	67	57	46	43	53	40	71	52	55	46
13....	42	28	48	32	70	55	65	36	76	63	.....	.....	51	46	63	52	52	32	64	55	47	44	55	41	68	45	63	47
14....	53	18	55	22	75	51	71	33	75	60	.....	.....	50	47	63	50	52	35	66	53	53	45	64	34	66	52	64	42
15....	49	21	59	18	74	54	76	33	78	47	.....	.....	50	44	64	43	59	35	77	54	54	49	69	29	69	43	66	43
16....	55	24	58	26	72	56	60	34	71	50	.....	.....	61	41	65	45	56	30	72	55	56	42	65	31	65	39	62	40
17....	44	32	50	38	75	52	58	38	73	45	.....	.....	56	46	68	44	56	25	69	52	47	42	52	31	70	43	52	48
18....	40	30	45	34	62	52	59	36	67	53	.....	.....	52	42	61	51	50	38	61	53	47	40	45	41	70	49	48	44
19....	37	21	44	31	60	54	58	34	72	45	.....	.....	53	39	62	47	51	34	60	51	51	40	58	29	59	45	54	40
20....	32	21	40	27	69	56	61	29	64	48	.....	.....	51	40	61	47	53	33	64	51	47	38	47	35	61	49	56	44
21....	30	18	38	10	68	52	61	29	66	48	.....	.....	53	40	56	40	50	28	64	50	45	36	53	28	54	46	53	35
22....	37	7	50	14	71	41	60	32	65	46	.....	.....	62	43	58	35	50	27	69	48	51	40	59	22	55	32	59	34
23....	44	16	50	20	69	40	58	34	67	47	.....	.....	58	45	59	34	52	24	76	46	54	39	66	25	58	34	58	33
24....	45	18	47	20	72	50	56	36	75	44	.....	.....	61	42	62	39	53	25	66	53	47	41	62	25	62	36	54	36
25....	39	31	45	34	73	51	60	40	73	42	.....	.....	56	49	62	50	52	31	64	49	46	44	51	38	63	44	57	48
26....	42	33	47	37	70	52	46	43	74	40	.....	.....	58	50	61	42	51	34	65	49	49	45	46	36	63	40	54	52
27....	42	29	44	32	75	54	48	40	75	41	.....	.....	55	43	58	44	57	28	64	49	50	39	55	38	60	48	59	42
28....	35	25	40	21	71	56	50	36	72	49	.....	.....	54	45	54	38	50	28	69	49	47	41	53	26	57	40	50	40
29....	35	25	39	31	69	51	47	34	71	42	.....	.....	50	44	49	43	54	28	65	48	44	37	37	30	57	39	51	44
30....	34	12	38	20	55	48	55	30	65	51	.....	.....	52	38	53	38	38	32	61	45	47	36	54	25	48	41	56	42
Mns..	45.6	27.1	50.7	29.2	73.9	54.3	60.6	37.1	76.8	49.7	.....	.....	56.2	45.4	63.7	46.6	57.9	34.0	70.3	53.3	51.7	43.7	58.1	35.3	65.5	45.2	59.0	45.9

Date.	California—Continued.																									
	Redlands.		Sacramento.		San Diego.		San Fran-cisco.		San Jose.		San Luis Obispo.		Santa Bar-bara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	74	46	60	56	69	56	61	53	65	58	64	51	69	50	60	45	56	33	70	57	48	36	51	48	64	32
2.....	68	54	67	57	66	60	60	53	65	54	68	52	72	56	65	42	56	29	56	56	48	36	64	38	64	34
3.....	70	58	65	52	67	59	59	53	68	52	63	49	65	59	62	52	56	27	62	47	47	30	59	23	70	25
4.....	77	45	60	54	68	57	58	53	61	53	67	51	67	56	62	52	51	40	60	51	48	33	49	31	60	24
5.....	75	44	60	52	66	53	62	52	66	52	68	52	69	48	59	51	50	41	60	52	34	33	52	39	61	26
6.....	81	45	72	56	69	52	67	57	69	55	76	58	76	49	65	56	53	38	69	53	46	33	63	44	75	30
7.....	87	49	69	52	77	57	72	54	78	50	85	58	82	48	65	51	61	38	68	53	56	36	66	35	75	39
8.....	89	54	70	53	79	58	70	52	75	48	86	50	88	52	63	50	67	42	69	49	61	35	67	36	77	25
9.....	85	52	62	48	82	62	60	52	63	51	77	50	73	50	60	48	61	38	63	48	56	42	73	35	79	28
10.....	77	50	63	52	73	58	58	53	65	46	67	48	68	53	58	44	56	27	67	52	50	39	62	40	76	37
11.....	70	56	59	51	69	60	60	53	59	52	62	50	67	58	64	53	55	30	60	51	34	29	49	37	61	38
12.....	68	55	55	49	65	57	58	52	62	52	61	55	60	58	60	48	48	25	57	50	36	30	48	34	49	26
13.....	65	50	61	51	70	54	59	52	65	48	58	53	60	56	58	44	50	24	58	48	37	30	51	37	45	29
14.....	65	43	64	47	67	51	66	51	65	46	65	52	65	53	65	40	50	23	64	46	34	30	.....	.....	58	27
15.....	73	42	64	43	73	52	58	49	63	46	71	57	72	47	62	50	53	39	63	40	34	26	53	25	61	23
16.....	66	50	62	44	68	55	58	49	53	43	73	44	73	48	65	42	54	38	64	40	42	24	36	27	62	20
17.....	68	43	55	45	68	52	57	48	58	43	65	42	65	45	68	44	41	33	58	43	38	32	57	38	49	21
18.....	56	44	53	47	65	56	56	49	57	49	58	46	68	55	65	40	38	28	54	50	35	30	52	39	47	30
19.....	59	44	61	45	60	51	60	50	60	48	60	46	60	44	65	35	41	32	58	45	36	27	41	33	51	27
20.....	60	48	60	47	64	53	58	51	59	45	61	47	65	46	63	43	37	17	58	49	36	20	51	19	48	31
21.....	61	46	54	39	64	54	58	47	56	40	57	48	66	46	64	34	40	19	56	38	28	18	44	20	51	21
22.....	66	36	55	36	68	49	59	46	58	35	64	49	66	42	58	30	38	20	55	34	34	16	45	18	55	17
23.....	69	36	57	36	72	48	59	46	63	33	68	42	69	39	59	30	46	32	54	31	42	18	47	19	56	18
24.....	69	45	55	36	66	54	56	46	61	32	59	36	62	45	60	32	37	35	55	33	41	20	46	.....	50	18
25.....	64	46	61	48	62	50	60	50	63	48	62	47	58	46	62	36	41	32	62	36	33	26	.....	.....	48	30
26.....	64	38	56	47	62	48	57	52	58	47	61	37	63	44	60	30	48	25	60	43	35	28	.....	.....	48	25
27.....	62	39	58	45	63	52	58	51	58	40	62	46	67	46	60	30	39	29	59	47	32	26	54	30	50	29
28.....	70	43	55	40	64	53	55	48	58	37	61	48	68	45	55	35	40	28	54	38	30	18	.....	23	48	22
29.....	66	43	52	45	65	51	58	48	56	45	53	40	63	43	59	38	40	30	54	44	29	23	54	43	40	26
30.....	58	40	55	42	61	48	59	48	59	41	58	40	62	47	55	33	41	29	56	40	27	17	40	27	45	20
Means...	69.4	46.1	60.0	47.2	67.7	54.0	59.9	50.6	62.2	46.3	65.3	48.1	67.6	49.1	61.5	41.9	48.1	30.7	60.4	45.5	39.6	28.1	52.8[d]	32.2[d]	57.4	26.5

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 12, COLUMBIA VALLEY.

By EDWARD A. BEALS, District Editor.

The only noteworthy climatological features were the coast storms during the last decade of the month. The four-masted schooners *Balboa* and *Aloha*, each worth about $30,000, were so buffeted by these storms as to become total wrecks. The *Balboa* went ashore on December 1 and the *Aloha* became water-logged and was abandoned by her crew near the end of the month. No lives were lost in either case.

Ample and timely warnings were furnished shipping in port, but vessels at sea could not be reached. Those in port heeded the warnings, or the casualties would have been greater than they were. These storms expended most of their energy near the coast, and the weather in the interior of the district was unusually pleasant and favorable for agricultural operations, other outdoor work, and for the transportation interests.

TEMPERATURE.

Exceptionally mild weather prevailed over practically the entire district, only a few scattered places in western and northern Oregon and western Washington reporting temperatures below the November normal. The excess in temperature was most marked in southeastern Idaho, where it ranged from 2° to more than 5° above the normal.

The mean temperature of the district, as determined from the records of 290 stations, was 40.4°, which was 1.3° above the normal. The highest temperature, 76°, was recorded at Combs Flat and Talent, Oreg., on the 2d and 8th, respectively—the former at an elevation of 4,027 feet and the latter 1,800 feet. The lowest temperature, −14°, occurred at Snake River, Wyo., on the 24th, at an elevation of 7,000 feet. The greatest range in temperature, 55°, was at Austin and Silver Lake, Oreg., at altitudes of over 4,200 feet. The highest monthly mean, 50.9°, was at Brookings, on the Oregon coast, and the lowest, 24.2°, was recorded at Snake River, Wyo.

The following table shows for comparative purposes the mean temperature and departure from normal for the States of Oregon, Washington, and Idaho, and those portions of Montana and Wyoming in District No. 12, for the months of November during the last five years:

Years.	Oregon.		Washington.		Idaho.		Montana.		Wyoming.	
	Mean.	Departure.	Mean.	Departure.	Mean.	Departure.	Mean.	Departure.	Mean.	Departure.
1909	43.2	0.0	41.3	+0.4	37.7	+2.0	35.3	+3.5	29.9	−0.2
1910	42.3	−0.7	40.7	+1.8	38.2	+1.8	34.3	+2.2	31.6	+3.7
1911	41.1	−1.0	37.9	−2.2	32.3	−4.5	27.7	−5.3	20.7	−8.6
1912	42.6	+0.6	41.6	+1.0	38.0	+1.5	36.1	+2.9	29.3	+1.2
1913	42.4	+0.9	41.4	+0.9	38.5	+2.3	36.1	+2.6	31.4	+2.4

PRECIPITATION.

While there was an unusually large number of cloudy days the precipitation for the district, as a whole, was below the average for the month. The precipitation was unevenly distributed, being below normal in Oregon, Washington, and Montana, while in Idaho and Wyoming it was above the November average. Owing to mild temperatures the precipitation was more than usual in the form of rain, but considerable snow fell in elevated sections and at the close of the month good depths of well-packed snow were reported from the higher mountains and valleys.

The average precipitation for the district, as computed from the records of 379 stations, was 4.18 inches, which was 0.75 of an inch below the normal. The greatest 24-hour rainfall, 3.90 inches, occurred at Glenora, Oreg., on the 5th, at an elevation of 575 feet. The greatest monthly amount, 26.90 inches, was recorded at Quinault, Wash., on the west slope of the Olympic Mountains, and the least monthly amount, 0.09 inch, fell at Irwin, Idaho, at an altitude of 6,500 feet. Snowfall to the depth of 62 inches was reported from Gold Hill, Wash., at 4,454 feet elevation.

The average monthly precipitation with departure from normal for the month of November during the last five years is shown in the following table for the States of Oregon, Washington, and Idaho, and for those portions of Montana and Wyoming in District No. 12:

Years.	Oregon.		Washington.		Idaho.		Montana.		Wyoming.	
	Mean.	Departure.	Mean.	Departure.	Mean.	Departure.	Mean.	Departure.	Mean.	Departure.
1909	10.77	+6.07	9.54	+3.27	4.63	+1.77	4.40	+1.55	3.48	+1.58
1910	8.27	+2.83	6.62	+1.29	3.49	+0.76	3.52	+1.23	2.48	+0.04
1911	4.14	−2.00	5.41	−0.42	2.37	+0.08	1.91	+0.30	3.04	+0.42
1912	4.62	−0.51	5.01	−0.19	1.90	−0.06	1.67	−0.44	1.72	−0.11
1913	4.39	−0.19	5.33	−0.28	2.94	+0.75	1.57	−0.50	1.92	+0.85

THE RIVERS.

The Snake River was above normal during November and the Willamette considerably below. In the Columbia River nearly normal stages were recorded, and the Willamette River rose throughout the month, reaching the highest stage on the 30th at all points. Fluctuations in the Snake and Columbia were not pronounced enough to deserve mention.

The following table summarizes river conditions for the month:

Station.	River.	Highest.	Date.	Lowest.	Date.	Mean.	Normal.
Albany	Willamette	7.3	30th	1.6	1st [1]	3.9	4.8
Salem	do	8.0	30th	0.6	1st	3.6	4.5
Wilsonville	do	12.7	30th	2.3	1st	6.9	9.6
Oregon City	do	7.7	30th	1.5	1st	5.0	.....
Portland	do	7.3	30th	2.2	4th [1]	4.1	4.2
Jefferson	Santiam	6.3	30th	1.7	1st [1]	3.5	4.0
McMinnville	Yamhill	20.2	30th	1.5	1st	10.8	8.4
Cazadero	Clackamas	4.8	23d	1.4	3d [1]	2.5	.....
Kamiah	Clearwater	4.3	12th	3.4	26th [1]	3.7	.....
Weiser	Snake	5.2	8th	4.5	17th	4.9	4.4
Lewiston	do	3.5	10th [1]	2.8	1st [1]	3.1	2.5
Riparia	do	4.7	14th [1]	3.5	1st [1]	3.8	3.4
Bonners Ferry	Kootenai	1.8	2d [1]	1.0	25th	1.4	1.7
Newport	Pend Oreille	0.4	27th [1]	−0.1	1st [1]	0.1	0.1
Northport	Columbia	2.8	1st	−4.4	29th	3.8	3.4
Wenatchee	do	6.9	1st [1]	6.2	27th [1]	6.5	7.0
Umatilla	do	4.0	1st	3.4	28th [1]	3.7	3.4
The Dalles	do	4.9	6th	4.1	26th [1]	4.4	4.3
Cascade Locks	do	3.5	9th	2.6	20th [1]	3.0	3.2
Vancouver	do	5.2	28th	1.6	6th [1]	3.1	4.2

[1] The stage was observed on more than one date.

MISCELLANEOUS PHENOMENA.

Very high winds were experienced on several dates. On the 29th they were of gale force along the coast and with high seas caused considerable damage to shipping and delayed the movement of vessels from port. Maximum velocities above 40 miles an hour were reported as follows: North Head, Wash., 84 miles, south, on the 29th; Seattle, Wash., 49 miles, south, on the 29th; and at Tatoosh Island, Wash., the wind attained a velocity of 50 or more miles an hour on 11 different dates, with an average hourly velocity of 20.7 miles for the month.

Thunderstorms occurred in Idaho on the 10th and 11th, and in Oregon on the 20th, 27th, and 28th, accompanied by hail in the last-named State.

Heavy fogs were frequent in Oregon and Washington.

TABLE 1.—*Climatological data for November, 1913. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana.																				
Anaconda	Deer Lodge	5,330	11	34.9	+ 0.8	61	9	7	21	31	1.00	+ 0.24	0.36	4.3	9	11	8	11	.....	C. D. Demond.
Butte	Silver Bow	5,716	18	34.0	+ 0.5	59	9	11	21	28	0.52	− 0.30	0.16	4.0	5	10	8	12	nw.	J. R. Wharton.
Columbia Falls	Flathead	3,100	17	36.4	+ 4.0	52	8†	17	13	25	1.78	− 0.59	0.32	1.0	12	4	2	24	sw.	J. M. Grist.
Como	Ravalli	3,750	4	41.3	.....	59	24	22	14	39	1.08	.....	0.35	T.	5	10	5	15	.....	Hiram Platt.
Dayton	Flathead	2,925	8	37.9	.....	58	16	17	21	27	1.15	.....	0.40	0.5	5	6	0	24	.....	A. J. Ruechell.
Deer Lodge	Powell	4,509	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. B. Grant.
East Anaconda	Deer Lodge	5,500	7	34.9	.....	55	1†	15	21	26	1.13	.....	.....	4.9	...	11	8	11	.....	C. D. Demond.
Fortine	Lincoln	2,975	7	33.4	.....	58	14	11	3†	47	0.66	.....	0.17	1.0	12	5	5	20	e.	Mike Petery.
Hamilton	Ravalli	3,524	10	38.4	+ 4.0	59	16	19	14†	27	0.43	− 0.43	0.22	T.	5	12	4	14	sw.	Hamilton Chamber of Commerce.
Hat Creek	Powell	6,000	3	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.48	8.3	8	3	13	14	w.	M. K. Landreth.
Haugan	Missoula	3,150	1	33.6	.....	51	3†	15	14	31	3.73	.....	0.77	18.5	16	3	15	12	sw.	U. S. Forest Service.
Heron	Sanders	2,261	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. Knott.
Kalispell	Flathead	2,965	16	35.4	+ 3.4	58	16	15	21	24	1.16	− 0.74	0.27	1.4	13	4	6	20	w.	U. S. Weather Bureau.
Libby	Lincoln	2,075	3	35.6	+ 0.8	61	16	17	14	30	1.67	− 2.54	0.31	5.6	14	5	8	17	.....	U. S. Forest Service.
Missoula	Missoula	3,225	34	35.8	+ 3.3	53	9	19	15†	26	0.94	− 0.38	0.27	T.	7	9	13	8	.....	U. S. Weather Bureau.
Ovando	Powell	4,050	13	33.4°	+ 3.6	55°	17	11°	15	32°	1.06	− 1.11	0.36	6.0	9	.....	.....	.....	w.	S. B. Muchmore.
Philipsburg	Granite	5,273	9	36.0°	+ 2.6	67°	9	5°	21	42°	1.40	+ 0.33	0.65	4.5	6	15°	6°	6°	sw.	G. T. Bramble.
Plains	Sanders	2,473	14	37.2	+ 4.2	62	16	16	21	26	1.65	+ 0.22	0.50	0.5	9	4	17	9	sw.	James M. Self.
Pleasant Valley	Flathead	3,500	5	32.1	.....	56	9	3	21	39	1.22	.....	0.45	2.9	12	3	6	21	w.	A. D. Stillman.
Polson	....do	2,920	5	39.4	.....	65	1	22	14†	36	1.94	.....	0.70	0	7	.....	.....	.....	.....	F. P. Brown.
Saint Ignatius	Missoula	2,911	7	37.4	.....	60	16	12	21	34	1.36	.....	0.45	0	8	6	14	10	.....	U. S. Reclamation Service.
Saltese	....do	3,600	8	.....	.....	.....	.....	.....	.....	.....	4.78	− 0.86	0.85	20.0	16	8	3	19	w.	Martin S. Pixley.
Stevensville	Ravalli	3,500	1	35.6	.....	58	16	16	21	26	0.75	.....	0.21	0.3	7	10	6	14	s.	University Orchard Co.
Thompson Falls	Sanders	2,424	1	37.0	.....	60	16	17	13	32	2.56	.....	0.58	1.5	13	8	6	16	sw.	U. S. Forest Service.
Trout Creek	....do	2,375	1	.....	.....	.....	.....	.....	.....	.....	3.27	.....	0.50	2.0	10	1	0	29	sw.	James Hylent.
Victor	Ravalli	3,537	...	38.0	.....	59	16	18	14	32	0.70	.....	0.25	T.	5	7	5	18	sw.	R. W. Fisher.
Willow Glen Stock Farm.	Deer Lodge	5,064	2	33.0	.....	55	2†	10	16	35	.....	.....	.....	.....	.....	9	0	21	ne.	G. E. Luce.
Wyoming.																				
Afton	Lincoln	6,200	9	33.9	.....	60	8†	7	23	42	1.58	.....	0.42	7.0	8	11	2	17	.....	A. V. Call.
Alta	....do	6,500	3	31.6	.....	61	9	2	23	45	1.95	.....	0.46	8.2	10	6	9	15	sw.	Mrs. Lucy Brown.
Bechler River	Yellowstone Park.	6,500	1	.....	.....	.....	.....	.....	.....	.....	2.51	.....	0.60	24.1	11	7	12	11	sw.	U. S. Army.
Bedford	Lincoln	5,900	13	33.4	+ 2.4	59	1†	6	23	39	1.97	+ 0.85	0.60	5.2	11	10	6	14	w.	C. G. Heiner.
Moran	....do	6,770	1	26.6	.....	46	9	− 5	24	37	1.61	.....	0.80	5.0	15	2	8	20	.....	U. S. Reclamation Service.
Snake River	Yellowstone Park.	7,000	7	24.2	.....	47	3	− 14	24	45	3.17	.....	0.89	40.0	8	14	0	16	w.	U. S. Army.
Nevada.																				
Gold Creek	Elko	6,600	0	34.4	.....	61	9	− 3	22	45	1.90	.....	0.42	11.0	13	7	9	14	n.	Forest Supervisor.
San Jacinto	....do	.....	8	34.3	.....	61	9	4	30	36	0.90	.....	0.27	3.5	7	.....	.....	.....	.....	F. W. McEntire.
Utah.																				
Standrod	Box Elder	.....	....	36.8	.....	61	1	14	23	25	1.97	.....	0.44	3.2	11	14	6	10	sw.	T. B. Jones.
Idaho.																				
Albion	Cassia	4,650	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Bocock.
Almo	....do	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. D. Cahoon.
American Falls	Power	4,341	21	36.8	+ 1.6	68	2	16	16†	42	2.64	+ 1.33	0.64	11.0	6	17	5	8	ne.	Mrs. I. M. Arroll.
Arrowrock	Boise	3,100	1	42.4	.....	65	9	18	22	29	4.28	.....	1.02	6.7	15	15	4	11	w.	U. S. Reclamation Service.
Blackfoot	Bingham	4,503	17	37.0	+ 2.6	65	1	14	24	36	0.96	+ 0.04	0.52	1.0	6	7	18	5	sw.	E. A. Dowd.
Blackfoot Dam	Bannock	6,200	3	34.0	.....	59	9	10	21	35	1.84	.....	0.35	4.5	11	10	1	19	s.	S. C. Waddell.
Bogus Creek	Boise	4,200	4	.....	.....	.....	.....	.....	.....	.....	5.40	.....	0.84	.....	13	1	20	9	.....	F. P. Ingraham.
Boise	Ada	2,739	27	43.5	+ 3.9	67	9	26	14	29	2.82	+ 1.96	0.88	1.8	15	6	8	16	se.	U. S. Weather Bureau.
Boise King	Elmore	4,000	....	36.0	.....	63	9	14	24	34	4.51	.....	1.41	13.3	13	7	9	14	.....	A. W. Stevens.
Bonners Ferry	Bonner	1,850	6	36.8	.....	52	8†	18	16	34	5.11	.....	0.97	12.0	16	7	1	22	.....	W. H. Heideman.
Boulder Mine	Boise	4,800	3	.....	.....	.....	.....	.....	.....	.....	5.10	.....	1.14	17.4	14	14	4	12	.....	Patrick Moriarty.
Bonanl	Twin Falls	3,800	6	40.6	.....	68	1	19	23	34	2.25	.....	0.70	4.0	8	12	10	8	w.	S. C. Orr.
Burke	Shoshone	4,082	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. K. Barnum.
Caldwell	Canyon	2,372	8	42.2	.....	64	2	19	23	38	2.05	.....	0.45	2.0	12	2	21	7	e.	Wm. J. Boone.
Caldwell Experiment Station.	....do	2,372	1	.....	.....	.....	.....	17	14	....	2.06	.....	0.54	1.8	12	.....	.....	.....	.....	C. B. Hampson.
Cambridge	Washington	2,651	17	41.4	+ 3.4	60	8	22	14	30	3.32	+ 0.82	0.85	0.2	11	7	3	20	w.	Chas. H. Shepherd.
Challis	Custer	5,300	....	33.2	.....	64	9	8	14†	43	.....	.....	.....	.....	.....	12	0	18	w.	J. A. Harrington.
Chesterfield	Bannock	5,424	16	36.2	+ 5.5	60	1	5	21†	41	1.69	+ 0.75	0.43	1.0	5	6	17	7	sw.	Chas. S. West.
Clarks Fork	Bonner	2,084	1	38.1a	.....	57a	9	24a	14†	25a	4.87	.....	0.69	4.5	17	6	13	11	.....	Wm. Potter.
Coeur d'Alene	Kootenai	2,157	18	40.8	+ 4.5	56	16†	28	13†	24	.....	.....	.....	3.0	16	.....	.....	.....	.....	J. H. O'Rourke.
Council	Adams	3,059	1	38.9	.....	60	8	15	24	31	5.47	.....	1.28	4.5	14	5	6	19	.....	F. L. Featherston.
Culdesac	Nez Perce	1,520	4	39.0	.....	56	8	20	15†	24	1.69	.....	0.42	3.3	10	1	13	16	.....	Mrs. B. B. Caldwell.
Deary	Latah	2,854	1	38.1	.....	61	8	20	13	33	3.45	.....	1.27	7.0	9	4	7	19	sw.	W. J. Davis.
Dent	Clearwater	1,350	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Emil Schuessler.
Driggs	Fremont	6,097	6	32.6	.....	60	9	5a	23	42a	1.17	.....	0.32	3.5	6	.....	.....	.....	sw.	W. H. Durrant.
Emmett	Canyon	2,350	6	43.0	.....	63	9	22	14†	29	1.99	.....	0.40	2.0	12	10	12	8	ne.	U. S. Forest Service.
Garnet	Elmore	2,575	13	46.4	+ 2.4	70	9	25	15	31	1.15	+ 0.40	0.30	0	5	15	6	9	e.	A. A. Kenison.
Geneva	Bear Lake	6,171	4	.....	.....	.....	.....	.....	.....	.....	1.85	.....	1.20	10.0	4	17	5	8	.....	F. W. Boehme.
Glenns Ferry	Elmore	2,569	4	43.2	.....	70	1†	18	23	38	2.02	.....	0.68	T.	7	17	3	10	.....	I. E. Perkins.
Gooding	Gooding	3,572	3	40.5	.....	69	1	8	22	39	2.34	.....	0.58	3.2	10	12	6	12	w.	J. S. Welch.
Grace	Bannock	5,400	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Joy.
Grandview	Owyhee	2,300	3	42.9	.....	68	9	20	15	35	0.31	.....	0.15	0	6	12	6	12	se.	H. E. Hanna.
Grimes Pass	Boise	5,200	3	.....	.....	.....	.....	.....	.....	.....	5.70	.....	1.70	12.0	13	.....	.....	.....	.....	Jos. M. Clarke.
Guffey	Owyhee	2,381	4	45.4	.....	68	9	23	15	32	1.35	.....	0.27	T.	13	23	6	1	e.	Fred Perry.
Hailey	Blaine	5,347	10	35.4	− 0.1	61	1	6	22	30	2.60	+ 1.22	0.76	15.5	11	9	7	14	sw.	U. S. Forest Service.
Hollister	Twin Falls	4,550	1	40.2°	.....	67°	10	18°	22	37°	2.13	.....	0.55	2.5	13	.....	.....	.....	s.	Carl E. Tappan.
Hotspring	Owyhee	2,590	7	45.6	.....	66	9	24	15	29	1.16	.....	0.31	T.	7	12	7	11	.....	J. M. Waterhouse.
Idaho City	Boise	4,000	11	.....	.....	.....	.....	.....	.....	.....	4.55	+ 1.50	.....	10.5	.....	.....	.....	.....	.....	Mrs. Emma Hammer.
Idaho Falls	Bonneville	4,742	18	37.8	+ 5.3	65	1	13	24	35	0.80	− 0.26	0.15	2.0	11	11	4	15	ne.	Dr. T. M. Bridges.
Indian Cove	Owyhee	2,480	....	43.4	.....	69	9	20	15	35	1.50	.....	0.53	.....	7	15	4	11	w.	Capt. O. M. Carter.
Indian Valley	Adams	2,999	4	.....	.....	.....	.....	.....	.....	.....	3.50	.....	0.74	4.3	12	9	4	17	s.	A. M. Henke.
Irwin	Bonneville	6,500	11	35.60	+ 2.6	60	9	13	23	34	0.09	− 1.19	0.03	.....	5	6	4	20	e.	Miss Mamie Weeks.
Kellogg	Shoshone	2,305	8	38.4a	.....	62a	2	23a	21	35b	3.47	.....	0.62	2.5	16	0	0	30	.....	W. McM. Huff.
Kilgore	Fremont	6,850	....	27.9°	.....	54	9	− 6	21	36	.....	.....	.....	.....	.....	.....	.....	.....	sw	W. H. McCormick.
Kirkham	Boise	4,200	3	.....	.....	.....	.....	.....	.....	.....	2.46	.....	0.56	12.0	8	6	10	14	w.	Mrs. Josie B. West.

TABLE 1.—*Climatological data for November, 1913. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Idaho*—Continued.**																				
Kooskia	Idaho	1,261	4	39.8		58	6	23	22	26										U. S. Forest Service.
Lakeview	Bonner	2,250	15	36.3	− 1.1	48	1	26	5	16	6.37	+ 1.86	0.75	2.0	20	0	4	26	sw.	E. D. Faust.
Landore	Adams	5,300	8	34.4		55	9	13	22	28	6.25		1.30	39.3	18					Mrs. Emma L. Brown.
Leadore	Lemhi		1																	Tom Keating.
Lewiston	Nez Perce	757	19	43.6	+ 2.7	60	8	29	13	23	1.50	+ 0.18	0.36	0.2	13	3	6	21	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	3								4.45		1.25	17.9	13	3	3	24	w.	Solon McCoy.
Loon Creek	Custer	6,000	3	36.0		56	9	4	24	35	2.17		0.45	7.5	11	6	2	22	sw.	Mrs. Mary Williams.
Mackay	do	5,897	5	33.2		56	2	6	22	30	0.72		0.37	4.0	3	5	21	4	nw.	U. S. Forest Service.
Malad	Oneida	4,700																		Uther Jones.
Meridian	Ada	2,657	2	42.4		65	8	23	14†	31	2.52		0.52	1.5	14	5	14	11	se.	A. W. Garrett.
Mesa	Adams	3,275	2	39.0		62	9	19	24†	25	3.78		0.74	8.8	13	9	1	20	n.	I. S. Carter.
Middle Fork	Idaho	1,397	2																	Jos. McGhee.
Milner	Twin Falls	4,110	9	40.7	+ 2.5	70	1	19	24	36	2.18	+ 0.65	0.36	3.2	11	14	4	12	w.	J. K. Young.
Moore	Blaine	5,700	12																	Chas. B. Lemon.
Moscow	Latah	2,748	20	38.3	+ 0.5	54	9	20	22	20				8.0		4	3	23	se.	University of Idaho.
Mountainhome	Elmore	3,150	7	40.6		66	1†	18	15†	37	1.97		0.46	T.	9	11	9	10		Mrs. Ellen Manion.
Murtaugh	Twin Falls		6	38.9		68	1	15	23	36	2.32			4.0		12	9	9	w.	J. E. Steinour.
Musselshell	Clearwater	3,171																		Henry R. Snyder.
New Meadows	Adams	3,950	8	34.3		62	12	0	24	41	4.93		0.73	14.5	18	4	14	12	s.	Lee Highley.
Nezperce	Lewis	3,082	3	37.4		58	9	22	3†	32	1.32		0.45		7	8	8	14		P. Mitchell.
Oakley	Cassia	4,700	19	40.8	+ 2.0	63	9	20	22	29	2.23	+ 1.35	0.65	0.2	8	9	5	16		John Adams.
O'Hara Bar	Idaho	1,557	2																	J. D. Agnew.
Orofino	Clearwater	1,027	8	40.0		55	8	26	7	25	2.89		0.39	2.0	13	0	17	13		Geo. Alteneder.
Paris	Bear Lake	5,946	18	32.8	− 0.7	60	1	10	23	35	1.46	+ 0.27	0.55	4.0	6	11	12	7	w.	John Norton.
Payette	Canyon	2,159	21	41.4	+ 0.8	63	9	20	15	30	1.99	+ 0.75	0.47	T.	13	6	8	16	s.	E. F. Allen.
Pierson	Custer	7,000	4	27.2		58	3	− 4	22	48	1.34		0.78	9.0	4	13	2	15	s.	D. P. Clarke.
Pine	Elmore	4,100	3								4.54		1.73	5.0	12	3	14	13		Mrs. Jennie Potter.
Pleasant Valley	Ada	3,000	5	41.2		67	9	21	15	33	1.88		0.49	0.8	11	11	4	15	se.	C. E. Friedrich.
Pocatello	Bannock	4,483	13	40.7	+ 4.4	64	1	21	24	34	2.01	+ 1.46	0.63	1.5	12	6	10	14	se.	U. S. Weather Bureau.
Poplar	Bonneville	5,500	3	33.9		46	13†	16	20	19	1.15		0.64	3.0	4	13	13	4		C. M. Lawrence.
Porthill	Bonner	1,665	23	35.8	+ 2.1	50	10	19	14	27	4.45	+ 1.10	0.62	6.0	17	8	3	19	sw.	H. A. French.
Priest River Experiment Station:																				
No. 1	do	2,500	1	34.5		46	8	22	13†	15	7.44		1.20	16.6	20	4	3	23	sw.	U. S. Forest Service.
No. 2	do	2,500	1	35.9		55	8	22	13†	27	6.98		1.20	12.2	21	4	3	23	se.	Do.
No. 3	do		1	34.4		52	2†	16	13	32	7.02		1.27	15.0	21	4	3	23	se.	Do.
Pyle Creek	Boise	3,100	3								4.66		1.02	5.8	14	11	6	13	w.	P. V. Smith.
Rattlesnake	Elmore	4,000	3								4.50		1.35	5.3	13	10	5	15		R. M. Green.
Richfield	Lincoln	4,306	3	40.0		69	1	14	21	39	1.89		0.75	5.5	9				w.	Idaho Irrigation Co.
Rogerson	Twin Falls																			J. S. Bussell.
Roseworth	do	4,650	2								1.75		0.46	9.2	9	2	19	9	nw.	D. B. Hartwell.
Rupert	Minidoka	4,204	6	40.4		67	1	17	23	33	2.16		0.40	3.8	13	14	6	10	sw.	Will Parry.
St. Michael's Priory	Idaho	3,811		37.3		59	9	21	21	18	2.61		0.70	11.0	13	7	7	16	w.	Rev. Father Berthold, O.S.B.
Salmon	Lemhi	4,040	7	35.2		58	1	13	24	34	0.87		0.34	0.7	7	9	9	12	nw.	E. K. Abbott.
Sandpoint	Bonner	2,086	2	38.1		52	6†	24	13†	21	5.65		1.15	6.0	19	5	6	19	s.	S. M. Moore.
Sheep Hill	Boise	5,000	3								5.92		1.58	16.0	16					C. M. Gardner.
Shoshone	Lincoln	3,968	5																	Zell Truman.
Silver City	Owyhee	6,280	5								3.94		0.98	8.3	15	6	11	13	sw.	Russel Stoddard.
Soldier Creek	Blaine	5,755	2	32.4		58	9	4	21	31	4.84		1.37	21.0	10	12	6	12	nw.	J. E. Minear.
Springfield	Bingham	4,420	4	37.2		68	1	12	23	36	1.55		0.52	1.6	7	11	11	8	sw.	Mrs. W. A. Edwards.
Spring Hill	Ada	3,607		41.2		61	9	19	21†	25	3.44		0.82	6.7	11	2	8	20	nw.	Ray G. Lyons.
Sugar	Fremont	4,892	5	35.0		60	1	11	24	31	0.58		0.18	1.5	7	7	3	20	sw.	Utah-Idaho Sugar Co.
Sunnyside	Elmore	3,500	3	40.4		65	9	20	22†	34	2.27		0.56	0.5	13				nw.	Col. M. W. Wood.
Tripod Mountain	Boise	4,300	3								4.10		0.79	8.3	12	10	8	12		Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	7	40.6		61	9†	16	23	31	2.09		0.65	8.0	8	6	20	4	sw.	J. A. Waters.
Vernon	Fremont	5,050	14	35.4	+ 1.8	60	9	12	23†	30	1.38	+ 0.12	0.85		7	5	9	16	sw.	A. M. Slatery.
Weiser	Washington	2,114	1	41.2		59	8	20	14†	30	1.82		0.50	0	13	4	8	18	se.	J. W. Lapish.
Wendell	Gooding	3,400	4	41.6		67	1	18	22	35	1.79		0.43	3.5	6	14	6	10	w.	Chas. L. Dingler.
Weston	Franklin	4,460	14	38.4	+ 1.8	66	1	13	23	34	2.10	+ 0.66	0.85	T.	9	7	5	18	sw.	Wm. T. Chatterton.
Washington.																				
Aberdeen	Chehalis	162	22	44.3	− 1.1	56	2†	29	12†	23	17.58	+ 2.16	1.82	T.	22	3	4	23	e.	H. A. Benham.
Anacortes	Skagit	60	19																	Douglass Almond.
Anatone	Asotin	2,800		35.8		56	9	16	21	28	4.07		0.92	8.0	12	2	16	12	sw.	W. A. Hamliton.
Baker	Skagit	390	7	40.2		56	2	26	15	28	11.40		1.60	3.0	19	5	2	23		Robt. M. White.
Bellingham	Whatcom	60	18	46.0	+ 0.9	63	8	29	13	24	1.73	− 3.04	0.32	0	14	6	9	15		Sanford B. Mayhew.
Bellingham, (near)	do	107	2																	U. S. Bureau of Plt. Ind.
Blaine	do	57	16	42.5	+ 1.2	58	9	24	13†	27	5.61	− 1.67	0.90	0.2	21	4	6	20	se.	John W. Sheets.
Blewett	Chelan	2,200	4								4.29		0.90	17.0	15					John Burmeister.
Bremerton	Kitsap	40	15								7.14	− 0.87	1.70	0	15					U. S. Navy Yard.
Brewster	Okanogan	1,620	3	37.3		55	2	22	21†	26	2.13		0.70	7.8	10	3	15	12	sw.	Mrs. H. F. Bertram.
Buckley	Pierce	685		44.6		65	8	29	2	28	5.26		0.81	T.	21	1	9	20	sw.	Geo. C. Sears.
Bumping Lake	Yakima	3,400	2																	U. S. Reclamation Service.
Centralia	Lewis	212	20	47 0	+ 1.9	72	1	29	3†	40	6.22	− 2.66	0.93	0	19	4	10	16	s.	I. S. Turner.
Clearbrook	Whatcom	140	10	42.4	− 0.6	62	2	20	14	33	7.28	− 1.67	1.58	0	17	4	12	14	ne.	Geo. Gibbs.
Cle Elum	Kittitas	1,930	14	36.4	− 0.5	58	1	19	21	27	2.78	− 1.96	0.65	7.0	15	9	9	12	ne.	J. A. Balmer.
Colfax	Whitman	2,300	24	42.8	+ 3.3	62	17	19	13	33	2.73	− 0.49	0.50	2.0	11	15	2	13	n.	I. B. Doolittle.
Colville	Stevens	1,635	13	36.8	+ 3.1	54	6	17	14	30	2.70	+ 0.42	0.46	6.5	14	8	4	18	sw.	W. L. Sax.
Conconully	Okanogan	2,300	13	36.4	+ 1.9	54	3†	19	13	28	3.17	+ 1.21	0.95	7.0	14	3	13	14		Wm. Baines.
Coulee City	Grant	2,400		36.0		51	16	17	21	21	2.82		0.67		9	10	1	15		M. E. Jolly.
Cowiche	Yakima	1,874	2	40.2		56	1	25	21	24	1.33		0.40	8.5	8	9	9	12		U. S. Reclamation Service.
Darrington	Snohomish	567		40.8		63	3	24	13	26	17.69		2.10	5.0	20	5	4	21	sw.	Charles Burns.
Davenport	Lincoln	2,450	4	36.6		50	17†	22	20†	21	2.96		0.75	3.0	12	7	11	12		James L. Thayer.
Dayton	Columbia	1,700	27	43.8	+ 3.2	60	16	28	15	27	2.13	− 0.55	0.27	2.0	19	10	7	13		W. W. Hendron.
Deer Park	Spokane	2,050	2	40.4		73	3	21	22	51	3.91		0.60	6.8	18	5	5	20	se.	Robt. Allison, jr.
Detroit	Mason	30	5	44.2		61	2	29	20	27	9.56		1.50	0	19	4	8	18	s.	Walter O. Eckert.
Douglas Lake	Skagit	440																		Micheal Pecovitch.
Dryden	Chelan	960	3								3.47		0.55	4.7	23	8	6	16	se.	Wenatchee Valley Gas & El.
Duckabush	Jefferson	380	4																	Edwin Wentworth.
Ellensburg	Kittitas	1,571	25	38.0	+ 1.8	60	7	19	12	33	1.35	− 0.30	0.26	T.	12	9	7	14		R. Lee Barnes.
Eltopia	Franklin	598																		Frank O. Young.
Forks	Clallam	480	2	42.1		56	3	29	12†	21	21.20		2.76		19					Ruth Palmer.
Fort Simcoe	Yakima	1,427	18								4.53	− 0.97	0.50	2.5	7	0	14	16	w.	Richard Newmark.
Gerome	Stevens	1,200	1	38.1		55	6	22	21	32	4.92		0.86	5.5	14	2	16	12		W. W. King.
Goat Lake	Snohomish	2,900	4								19.54		3.49	37.5	22					C. M. Mackintosh.

TABLE 1.—*Climatological data for November, 1913. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Contd.																				
Gold Basin	Snohomish	1,360	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Gold Creek	Yakima	2,600	4	.....	.....	.....	.....	.....	.....	.....	3.15	.....	0.90	11.0	9	8	18	4	.....	John W. Anderson.
Gold Hill	do	4,454	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62.0	.....	.....	.....	.....	.....	C. J. Vasper.
Goldendale	Klickitat	1,600	7	42.4	.....	65	7	27	19	23	2.36	− 0.82	1.05	T.	8	1*	8*	20*	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	10	.....	.....	.....	.....	.....	.....	.....	10.59	+ 2.46	1.31	0	24	2	6	22	e.	C. H. Cleaver.
Guler	Klickitat	2,200	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.4	.....	3	6	21	.....	Frank Kuehnel.
Hanford	Benton	385	...	43.0	.....	63	16	24	20	29	0.75	.....	0.29	0	7	1	20	9	sw.	Frances Lee Bash.
Hatton	Adams	1,100	8	41.5	.....	58	24	24	12	24	1.41	.....	0.31	T.	10	11	2	17	sw.	Wm. Goodenough.
Huntsville	Columbia	1,400	5	.....	.....	.....	.....	.....	.....	.....	2.12	.....	0.65	0	8	.....	.....	.....	.....	Mrs. S. J. Hill.
Irene Mountain	Okanogan	2,700	4	.....	.....	.....	.....	.....	.....	.....	1.33	.....	0.40	7.5	9	11	2	17	s.	Mrs. Theo. Wheeler.
Kennewick	Benton	368	18	45.6	+ 3.4	66	21†	28	12	31	1.59	+ 0.62	0.48	0	10	.....	.....	.....	.....	R. E. Reed.
Kent	King	53	...	44.2	.....	59	3	27	20	28	6.46	.....	0.80	0	21	1	6	23	s.	A. O. Jeffries.
Kettle Falls	Stevens	1,265	4	37.2	.....	54	6	20	14	27	4.14	.....	0.74	9.0	15	2	15	13	.....	H. H. Cole.
Kiona	Benton	430	7	43.5	.....	62	24†	27	3†	32	0.85	.....	0.32	0	5	7	6	17	sw.	Dr. F. S. Hedger.
Knowlton (near)	Okanogan	3,800	...	39.6	.....	69	18	18	29	43	.....	.....	.....	16.7	.....	3	8	19	nw.	W. P. Jay.
Kosmos	Lewis	775	7	45.2	.....	68	12†	29	2	31	6.53	.....	0.92	1.0	20	3	23	4	ne.	J. A. Ulsh.
La Center	Clarke	250	16	42.6	− 1.0	62	8	21	13	35	8.29	− 1.06	1.07	T.	23	4	12	14	s.	Joseph Bros.
La Crosse	Whitman	1,400	4	41.6	.....	56	17	21	21	26	2.27	.....	0.48	0.5	14	7	5	18	e.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	4	36.6	.....	57	1	21	2†	34	4.63	.....	1.03	11.0	15	1	5	24	nw.	U. S. Reclamation Service.
Lake Kachess	do	2,235	5	36.0	.....	51	1	22	3	24	3.66	.....	1.00	17.5	18	5	1	24	w.	Do.
Lake Keechelus	do	2,479	5	35.8	.....	51	1	24	20	21	9.14	.....	1.90	41.2	22	5	5	20	nw.	Do.
Lakeside	Chelan	1,116	22	39.8	+ 1.8	54	1†	27	11†	24	1.98	+ 0.03	0.62	6.0	13	2	15	13	e.	W. H. Van Meter.
Laurel	Klickitat	1,900	4	.....	.....	.....	.....	.....	.....	.....	7.67	.....	1.65	16.6	18	2	14	14	w.	Mrs. M. E. Strout.
Laurier	Ferry	1,644	3	34.6	.....	50	8	19	14	18	3.10	.....	0.75	5.5	20	4	3	23	s.	Mrs. J. S. Myers.
Lone Tree	Chehalis	9	4	46.6	.....	59	9	36	15†	15	16.10	.....	1.96	0	22	0	15	15	se.	U. S. Engineer Corps.
Longmires Springs	Pierce	2,800	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	National Park Ranger.
Lost Creek	Okanogan	3,125	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. H. Leese.
McConihe	Grant	1,072	2	41.1	.....	59	16	25	20	27	1.41	.....	0.45	0.5	10	11	2	17	s.	Lucien F. McConihe.
McCumbers Ranch	Yakima	2,182	3	.....	.....	.....	.....	.....	.....	.....	6.75	.....	1.00	8.0	15	6	13	11	.....	Mrs. Mary McCumber.
Moses Lake	Grant	1,070	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. M. Flemming.
Mottinger	Benton	307	13	46.5	+ 2.3	65	4†	32	20†	29	1.60	+ 0.48	0.33	0	10	13	8	9	e.	G. H. Mottinger.
Mount Pleasant	Clallam	500	2	41.8	.....	66	9	28	21	25	6.67	.....	1.73	T.	19	2	15	13	sw.	W. M. Dorr.
Moxee	Yakima	1,000	21	41.0	+ 1.8	58	2†	21	12	31	1.49	+ 0.29	0.53	T.	13	4	6	20	.....	H. B. Scudder.
Newport	Pend Oreille	2,400	3	36.0	.....	53	3	16	22	28	6.35	.....	0.95	5.5	20	3	8	19	.....	Chas. M. Talmadge.
Nighthawk	Okanogan	3,050	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.4	.....	.....	.....	.....	.....	Steve Nagy.
North Head	Pacific	211	11	47.6	− 0.1	62	8	36	13	13	8.09	+ 1.76	1.06	0	23	0	2	22	se.	U. S. Weather Bureau.
Northport	Stevens	1,350	14	36.2	+ 1.5	52	8	23	13	21	2.84	+ 0.31	0.50	8.0	19	7	19	4	.....	W. F. Case.
North Sundale	Klickitat	.....	4	44.2	.....	63	1	28	12	24	1.67	.....	0.42	0	10	.....	.....	.....	.....	Ruth J. Shepard.
North Yakima	Yakima	1,070	4	41.2	.....	57	4†	24	21†	28	1.49	.....	0.42	T.	11	7	3	20	nw.	Albert Bender.
Odessa	Lincoln	1,540	10	39.8	.....	54	8†	22	20	27	2.16	.....	0.48	0.5	17	4	16	10	sw.	H. W. Rieke.
Olga	San Juan	50	23	45.5	+ 1.2	60	9	32	13	18	2.82	− 2.44	0.68	0	13	4	8	18	se.	Cecil S. Willis.
Olympia	Thurston	45	35	44.6	+ 0.2	58	2	30	3†	25	9.57	+ 0.16	1.20	0	21	3	7	20	sw.	C. W. Waters.
Omak	Okanogan	850	4	38.2	.....	57	2†	19	3†	30	1.70	.....	0.45	T.	11	8	5	17	s.	Saint John Umbrite.
Oroville	do	922	3	38.4	.....	60	6	20	3†	33	1.95	.....	0.50	1.5	7	9	3	18	s.	M. C. Jackman.
Peola	Garfield	4,000	4	.....	.....	.....	.....	.....	.....	.....	1.97	.....	0.45	6.8	11	8	12	10	sw.	Samuel Gruel, sr.
Pomeroy	do	1,860	21	43.2	+ 1.2	61	16	28	20	22	1.43	− 1.07	0.40	0.2	13	0	23	7	w.	Peter McClung.
Port Crescent	Clallam	259	18	41.7	− 0.6	59	15	28	13	21	9.05	+ 1.60	2.62	0	23	0	9	21	se.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	23	45.2	+ 0.2	59	3†	34	21	16	2.88	+ 0.14	0.74	0	18	2	6	22	se.	Frank Plummer.
Prosser	Benton	661	....	44.0	.....	64	16	23	20	27	0.90	.....	0.22	0	9	3	16	11	w.	E. L. Capps.
Pullman	Whitman	2,550	21	35.6	− 2.5	49	8	19	22	21	3.33	− 0.08	0.52	6.0	17	1	8	21	se.	State Agricultural College.
Queets River	Jefferson	16	2	44.6	.....	60	3	31	21	22	20.51	.....	2.02	T.	23	4	6	20	s.	C. A. Bullard.
Quinault	Chehalis	300	6	45.0	.....	60	2†	30	12†	29	26.90	.....	2.88	0	23	3	14	13	ne.	A. V. Higley.
Reardan	Lincoln	2,510	13	36.0	− 0.1	50	2†	17	22	20	3.14	+ 0.61	0.73	3.5	14	1	4	25	sw.	Chas. Shoemaker.
Republic	Ferry	2,628	13	33.6	+ 0.6	51	6	15	14†	25	1.64	− 0.09	0.31	6.0	17	6	2	22	nw.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James W. Nicol.
Ritzville	Adams	1,825	14	.....	.....	.....	.....	.....	.....	.....	2.11	+0.47	0.62	.....	13	.....	.....	.....	.....	Agent N. P. Ry.
Robertsville	Klickitat	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. R. Couger.
Rock Lake	Whitman	1 910	7	.....	.....	.....	.....	.....	.....	.....	2.92	.....	0.91	.....	10	.....	.....	.....	.....	H. C. Melcher.
Rosalia	do	2,425	21	38.4	+ 0.5	56	9	23	13†	22	2.92	− 0.27	0.50	2.0	17	1	10	19	sw.	Hans Mumm.
Russells Ranch	Yakima	2,870	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Adella Russell.
Seattle	King	248	22	46.2	+ 1.7	62	3	35	14	18	4.74	− 1.12	0.75	0	19	0	5	25	s.	U. S. Weather Bureau.
Sedro Woolley	Skagit	38	16	43.7	− 0.2	63	9	27	14	29	6.15	− 1.52	0.77	2.6	22	6	6	18	.....	Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	6	43.4	.....	63	24	29	20	24	1.45	.....	0.38	0	11	1	3	26	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom	510	3	39.2	.....	57	8	25	14	24	13.31	.....	2.10	3.5	24	7	0	23	.....	Skagit Power Co.
Snohomish	Snohomish	55	19	45.2	+ 0.8	68	8	29	3†	35	7.92	+ 1.38	1.09	0	22	8	3	19	s.	James Bylling.
Snoqualmie Falls	King	667	14	44.8	+ 0.2	64	8	28	14	20	7.07	− 2.33	1.19	0	24	5	2	23	.....	O. N. Wiswell.
Snoqualmie Pass	do	3,000	4	.....	.....	.....	.....	.....	.....	.....	5.25	.....	0.60	45.0	16	.....	.....	.....	e.	T. E. Steiner.
Snyders Ranch	Okanogan	2,200	4	32.8	.....	53	2	12	13†	36	3.25	.....	0.93	15.0	11	6	16	8	e.	Geo. M. Snyder.
South Bend	Pacific	140	18	46.2	− 1.0	65	3	28	14	28	17.91	+ 2.96	2.33	0	21	6	6	18	e.	Mrs. W. E. Buckingham.
Spokane	Spokane	1,943	32	40.6	+ 3.3	56	16	28	12	21	2.58	+ 0.28	0.93	1.4	18	1	5	24	s.	U. S. Weather Bureau.
State University	King	170	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	University of Washington.
Stokes Ranch	Okanogan	2,670	4	.....	.....	.....	.....	.....	.....	.....	2.88	.....	0.88	18.2	12	8	15	7	w.	Chas. W. Gunn.
Sullivan Lake	Pend Oreille	.....	...	.....	.....	.....	.....	.....	.....	.....	5.31	.....	0.72	20.0	16	4	10	16	.....	U. S. Forest Service.
Sumner	Pierce	77	5	44.0	.....	60	24	24	20	32	6.62	.....	0.75	0	21	1	5	24	n.	H. E. Thompson.
Sunnyside	Yakima	740	18	42.1	+ 1.8	62	16	23	20	31	1.15	+ 0.17	0.25	0	10	3	9	18	se.	U. S. Reclamation Service.
Tacoma	Pierce	213	27	45.3	+ 1.2	59	26	32	3	23	5.59	− 2.94	1.12	0	20	0	4	26	sw.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	28	45.8	− 0.1	58	8	36	20	14	15.06	+ 2.97	2.64	T.	24	2	12	16	e.	Do.
Tieton Canyon	Yakima	2,313	4	37.5	.....	53	16	24	28	20	3.02	.....	0.70	12.5	14	5	11	14	w.	U. S. Reclamation Service.
Touchet	Walla Walla	556	6	44.8	.....	63	23	26	12	31	1.21	.....	0.28	0	11	3	14	13	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	4	.....	.....	.....	.....	.....	.....	.....	5.31	.....	0.86	13.7	19	1	1*	15	sw.	Mrs. Maude Bernard.
Trinidad	Douglas	900	9	41.7	.....	59	16	27	21	25	1.59	.....	0.51	1.0	5	9	6	15	e.	J. C. Wheeler.
Vancouver	Clarke	100	38	45.5	+ 0.1	63	2	26	14	28	5.91	+ 0.17	0.93	0	19	3	8	19	nw.	A. A. Quarnberg.
Vashon Island	King	40	24	44.8*	− 0.9	55*	9†	31*	20	19*	3.75	− 4.01	0.73	0	20	5	2	23	s.	Miss G. McClintock.
Wahluke	Grant	410	9	44.4	.....	64	16	27	21	26	1.05	.....	0.33	0	7	3	6	21	.....	F. C. Koppen.
Wallace	Okanogan	4,000	4	.....	.....	.....	.....	.....	.....	.....	2.28	.....	0.72	13.3	14	9	6	15	s.	G. A. Wallace.
Walla Walla	Walla Walla	1,000	29	46.0	+ 3.1	62	16	34	15	21	1.91	− 0.22	0.42	T.	18	0	9	21	sw.	U. S. Weather Bureau.
Washougal	Clarke	650	13	45.4	− 0.2	61	2	30	12†	23	8.21	− 0.35	1.15	0	20	7	3	20	w.	F. M. Grout.
Waterville	Douglas	2,624	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. R. Hopewell.
Wenatchee	Chelan	639	....	42.3	.....	59	2	25	3†	33	1.79	.....	0.52	4.3	6	13	10	7	.....	A. A. Piper.
Wenatchee, near	do	1,169	14	37.2	+ 0.2	51	16	23	22	22	2.04	− 0.20	0.40	8.0	12	7	7	16	w.	Geo. A. Pitcher.
White Salmon	Klickitat	325	2	44.0	.....	60	2	31	12	20	4.72	.....	0.84	T.	23	2	3	25	e.	C. W. J. Reckers.
Wilbur	Lincoln	2,203	14	36.9	+ 1.4	54	1†	20	19†	31	2.94	+ 1.09	0.62	3.5	10	3	3	24	.....	R. J. Reeves.
Wind River	Skamania	1,300	2	40.9	.....	54	2	26	14	23	16.35	.....	2.06	5.5	23	1	10	19	sw.	U. S. Forest Service.
Winthrop	Okanogan	1,765	2	35.1	.....	65	2	15	13†	39	2.40	.....	0.68	18.5	17	15	4	11	.....	Metow Trading Co.
Yacolt	Clarke	850	...	.....	.....	.....	.....	.....	.....	.....	12.08	.....	1.64	0	20	7	0	23	s.	C. R. Miller.
Yale	Cowlitz	375	6	44.3	.....	61	9	30	15†	23	14.54	.....	2.57	1.5	23	6	2	22	sw.	J. A. Williams.

TABLE 1.—*Climatological data for November, 1913. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Idaho*—Continued.**																				
Kooskia	Idaho	1,261	4	39.8[e]	.....	58[e]	6	23[e]	22	26[e]	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Lakeview	Bonner	2,250	15	36.3	− 1.1	48	1	26	5	16	6.37	+ 1.86	0.75	2.0	20	0	4	26	sw.	E. D. Faust.
Landore	Adams	5,300	8	34.4	.....	55	9	13	22	28	6.25	.....	1.30	39.3	18	....	....	....	.....	Mrs. Emma L. Brown.
Leadore	Lemhi	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tom Keating.
Lewiston	Nez Perce	757	19	43.6	+ 2.7	60	8	29	13	23	1.50	+ 0.18	0.36	0.2	13	3	6	21	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	3	.....	.....	.....	.....	.....	.....	.....	4.45	.....	1.25	17.9	13	3	3	24	w.	Solon McCoy.
Loon Creek	Custer	6,000	3	36.0	.....	56	9	4	24	35	2.17	.....	0.45	7.5	11	6	2	22	sw.	Mrs. Mary Williams.
Mackay	....do	5,897	5	33.2	.....	56	2	6	22	30	0.72	.....	0.37	4.0	3	5	21	4	nw.	U. S. Forest Service.
Malad	Oneida	4,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Uther Jones.
Meridian	Ada	2,657	2	42.4	.....	65	8	23	14†	31	2.52	.....	0.52	1.5	14	5	14	11	se.	A. W. Garrett.
Mesa	Adams	3,275	2	39.0	.....	62	9	19	24†	25	3.78	.....	0.74	8.8	13	9	1	20	n.	I. S. Carter.
Middle Fork	Idaho	1,397	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jos. McGhee.
Milner	Twin Falls	4,110	9	40.7	+ 2.5	70	1	19	24	36	2.18	+ 0.65	0.36	3.2	11	14	4	12	w.	J. K. Young.
Moore	Blaine	5,700	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. B. Lemon.
Moscow	Latah	2,748	20	38.3	+ 0.5	54	9	20	22	20	.....	.....	.....	8.0	....	4	3	23	se.	University of Idaho.
Mountainhome	Elmore	3,150	7	40.6	.....	66	1†	18	15†	37	1.97	.....	0.46	T.	9	11	9	10	.....	Mrs. Ellen Manion.
Murtaugh	Twin Falls	.....	6	38.9[a]	.....	68[a]	1	15[a]	23	36[b]	2.32	.....	.....	4.0	....	12	9	9	w.	J. E. Steinour.
Musselshell	Clearwater	3,171	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry R. Snyder.
New Meadows	Adams	3,950	8	34.3	.....	62	12	0	24	41	4.93	.....	0.73	14.5	18	4	14	12	s.	Lee Highley.
Nezperce	Lewis	3,082	3	37.4	.....	58	9	22	3†	32	1.32	.....	0.45	.....	7	8	8	14	.....	P. Mitchell.
Oakley	Cassia	4,700	19	40.8	+ 2.0	63	9	20	22	29	2.23	+ 1.35	0.65	0.2	8	9	5	16	.....	John Adams.
O'Hara Bar	Idaho	1,557	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. D. Agnew.
Orofino	Clearwater	1,027	8	40.0	.....	55	8	26	7	25	2.89	.....	0.39	2.0	13	0	17	13	.....	Geo. Alteneder.
Paris	Bear Lake	5,946	18	32.8	− 0.7	60	1	10	23	35	1.46	+ 0.27	0.55	4.0	6	11	12	7	w.	John Norton.
Payette	Canyon	2,159	21	41.4[a]	+ 0.8	63[a]	9	20[a]	15	30[a]	1.99	+ 0.75	0.47	T.	13	6	8	16	s.	E. F. Allen.
Pierson	Custer	7,000	4	27.2	.....	58	3	− 4	22	48	1.34	.....	0.78	9.0	4	13	2	15	s.	D. P. Clarke.
Pine	Elmore	4,100	3	.....	.....	.....	.....	.....	.....	.....	4.54	.....	1.73	5.0	12	3	14	13	.....	Mrs. Jennie Potter.
Pleasant Valley	Ada	3,000	5	41.2	.....	67	9	21	15	33	1.88	.....	0.49	0.8	11	11	4	15	se.	C. E. Friedrich.
Pocatello	Bannock	4,483	13	40.7	+ 4.4	64	1	21	24	34	2.01	+ 1.46	0.63	1.5	12	6	10	14	se.	U. S. Weather Bureau.
Poplar	Bonneville	5,500	3	33.9	.....	46	13†	16	20	19	1.15	.....	0.64	3.0	4	13	13	4	.....	C. M. Lawrence.
Porthill	Bonner	1,665	23	35.8	+ 2.1	50	10	19	14	27	4.45	+ 1.10	0.62	6.0	17	8	3	19	sw.	H. A. French.
Priest River Experiment Station:																				
No. 1	....do	2,500	1	34.5	.....	46	8	22	13†	15	7.44	.....	1.20	16.6	20	4	3	23	sw.	U. S. Forest Service.
No. 2	....do	2,500	1	35.9	.....	55	8	22	13†	27	6.98	.....	1.20	12.2	21	4	3	23	se.	Do.
No. 3	....do	.....	1	34.4	.....	52	2†	16	13	32	7.02	.....	1.27	15.0	21	4	3	23	se.	Do.
Pyle Creek	Boise	3,100	3	.....	.....	.....	.....	.....	.....	.....	4.66	.....	1.02	5.8	14	11	6	13	w.	P. V. Smith.
Rattlesnake	Elmore	4,000	3	.....	.....	.....	.....	.....	.....	.....	4.50	.....	1.35	5.3	13	10	5	15	.....	R. M. Green.
Richfield	Lincoln	4,306	3	40.0[c]	.....	69[c]	1	14[c]	21	39[c]	1.89	.....	0.75	5.5	9	....	....	....	w.	Idaho Irrigation Co.
Rogerson	Twin Falls	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. S. Bussell.
Roseworth	....do	4,650	2	.....	.....	.....	.....	.....	.....	.....	1.75	.....	0.46	9.2	9	2	19	9	nw.	D. B. Hartwell.
Rupert	Minidoka	4,204	6	40.4	.....	67	1	17	23	33	2.16	.....	0.40	3.8	13	14	6	10	sw.	Will Parry.
St. Michael's Priory	Idaho	3,811	....	37.3	.....	59	9	21	21	18	2.61	.....	0.70	11.0	13	7	7	16	w.	Rev. Father Berthold, O.S.B.
Salmon	Lemhi	4,040	7	35.2	.....	58	1	13	24	34	0.87	.....	0.34	0.7	7	9	9	12	nw.	E. K. Abbott.
Sandpoint	Bonner	2,086	2	38.1	.....	52	6†	24	13†	21	5.65	.....	1.15	6.0	19	5	6	19	s.	S. M. Moore.
Sheep Hill	Boise	5,000	3	.....	.....	.....	.....	.....	.....	.....	5.92	.....	1.58	16.0	16	....	....	....	.....	C. M. Gardner.
Shoshone	Lincoln	3,968	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Zell Truman.
Silver City	Owyhee	6,280	5	.....	.....	.....	.....	.....	.....	.....	3.94	.....	0.98	8.3	15	6	11	13	sw.	Russel Stoddard.
Soldier Creek	Blaine	5,755	2	32.4	.....	58	9	4	21	31	4.84	.....	1.37	21.0	10	12	6	12	nw.	J. E. Minear.
Springfield	Bingham	4,420	4	37.2	.....	68	1	12	23	36	1.55	.....	0.52	1.6	7	11	11	8	sw.	Mrs. W. A. Edwards.
Spring Hill	Ada	3,607	....	41.2	.....	61	9	19	21†	25	3.44	.....	0.82	6.7	11	2	8	20	nw.	Ray G. Lyons.
Sugar	Fremont	4,892	5	35.0	.....	60	1	11	24	31	0.58	.....	0.18	1.5	7	7	3	20	sw.	Utah-Idaho Sugar Co.
Sunnyside	Elmore	3,500	3	40.4	.....	65	9	20	22†	34	2.27	.....	0.56	0.5	13	....	....	....	nw.	Col. M. W. Wood.
Tripod Mountain	Boise	4,300	3	.....	.....	.....	.....	.....	.....	.....	4.10	.....	0.79	8.3	12	10	8	12	.....	Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	7	40.6	.....	61	9†	16	23	31	2.09	.....	0.65	8.0	8	6	20	4	sw.	J. A. Waters.
Vernon	Fremont	5,050	14	35.4	+ 1.8	60	9	12	23†	30	1.38	+ 0.12	0.85	.....	7	5	9	16	sw.	A. M. Slatery.
Weiser	Washington	2,114	1	41.2	.....	59	8	20	14†	30	1.82	.....	0.50	0	13	4	8	18	se.	J. W. Lapish.
Wendell	Gooding	3,400	4	41.6	.....	67	1	18	22	35	1.79	.....	0.43	3.5	6	14	6	10	w.	Chas. L. Dingler.
Weston	Franklin	4,460	14	38.4	+ 1.8	66	1	13	23	34	2.10	+ 0.66	0.85	T.	9	7	5	18	sw.	Wm. T. Chatterton.
Washington.																				
Aberdeen	Chehalis	162	22	44.3	− 1.1	56	2†	29	12†	23	17.58	+ 2.16	1.82	T.	22	3	4	23	e.	H. A. Benham.
Anacortes	Skagit	60	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Douglass Almond.
Anatone	Asotin	2,800	....	35.8	.....	56	9	16	21	28	4.07	.....	0.92	8.0	12	2	16	12	sw.	W. A. Hamliton.
Baker	Skagit	390	7	40.2	.....	56	2	26	15	28	11.40	.....	1.60	3.0	19	5	2	23	.....	Robt. M. White.
Bellingham	Whatcom	60	18	46.0	+ 0.9	63	8	29	13	24	1.73	− 3.04	0.32	0	14	6	9	15	.....	Sanford B. Mayhew.
Bellingham, (near)	....do	107	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Bureau of Plt. Ind.
Blaine	....do	57	16	42.5	+ 1.2	58	9	24	13†	27	5.61	− 1.67	0.90	0.2	21	4	6	20	se.	John W. Sheets.
Blewett	Chelan	2,200	4	.....	.....	.....	.....	.....	.....	.....	4.29	.....	0.90	17.0	15	.....	.....	.....	.....	John Burmeister.
Bremerton	Kitsap	40	15	.....	.....	.....	.....	.....	.....	.....	7.14	− 0.87	1.70	0	15	.....	.....	.....	.....	U. S. Navy Yard.
Brewster	Okanogan	1,620	3	37.3	.....	55	2	22	21†	26	2.13	.....	0.70	7.8	10	3	15	12	sw.	Mrs. H. F. Bertram.
Buckley	Pierce	685	....	44.6	.....	65	8	29	2	28	5.26	.....	0.81	T.	21	1	9	20	sw.	Geo. C. Sears.
Bumping Lake	Yakima	3,400	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Centralia	Lewis	212	20	47 0	+ 1.9	72	1	29	3†	40	6.22	− 2.66	0.93	0	19	4	10	16	s.	I. S. Turner.
Clearbrook	Whatcom	140	10	42.4	− 0.6	62	2	20	14	33	7.28	− 1.67	1.58	0	17	4	12	14	ne.	Geo. Gibbs.
Cle Elum	Kittitas	1,930	14	36.4	− 0.5	58	1	19	21	27	2.78	− 1.96	0.65	7.0	15	9	9	12	ne.	J. A. Balmer.
Colfax	Whitman	2,300	24	42.8	+ 3.3	62	17	19	13	33	2.73	− 0.49	0.50	2.0	11	15	2	13	n.	I. B. Doolittle.
Colville	Stevens	1,635	13	36.8	+ 3.1	54	6	17	14	30	2.70	+ 0.42	0.46	6.5	14	8	4	18	sw.	W. L. Sax.
Conconully	Okanogan	2,300	13	36.4	+ 1.9	54	3†	19	13	28	3.17	+ 1.21	0.95	7.0	14	3	13	14	.....	Wm. Baines.
Coulee City	Grant	2,400	....	36.0[b]	.....	51[a]	16	17[b]	21	21[a]	2.82	.....	0.67	.....	9	10[d]	1[d]	15[d]	.....	M. E. Jolly.
Cowiche	Yakima	1,874	2	40.2	.....	56	1	25	21	24	1.33	.....	0.40	8.5	8	9	9	12	.....	U. S. Reclamation Service.
Darrington	Snohomish	567	....	40.8	.....	63	3	24	13	26	17.69	.....	2.10	5.0	20	5	4	21	sw.	Charles Burns.
Davenport	Lincoln	2,450	4	36.6	.....	50	17†	22	20†	21	2.96	.....	0.75	3.0	12	7	11	12	.....	James L. Thayer.
Dayton	Columbia	1,700	27	43.8	+ 3.2	60	16	28	15	27	2.13	− 0.55	0.27	2.0	19	10	7	13	.....	W. W. Hendron.
Deer Park	Spokane	2,050	2	40.4	.....	73	3	21	22	51	3.91	.....	0.60	6.8	18	5	5	20	se.	Robt. Allison, jr.
Detroit	Mason	30	5	44.2	.....	61	2	29	20	27	9.56	.....	1.50	0	19	4	8	18	s.	Walter O. Eckert.
Douglas Lake	Skagit	440	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Micheal Pecovitch.
Dryden	Chelan	960	3	.....	.....	.....	.....	.....	.....	.....	3.47	.....	0.55	4.7	23	8	6	16	se.	Wenatchee Valley Gas & El.
Duckabush	Jefferson	380	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Edwin Wentworth.
Ellensburg	Kittitas	1,571	25	38.0	+ 1.8	60	7	19	12	33	1.35	− 0.30	0.26	T.	12	9	7	14	.....	R. Lee Barnes.
Eltopia	Franklin	598	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank O. Young.
Forks	Clallam	480	2	42.1[b]	.....	56[c]	3	29	12†	21[c]	21.20	.....	2.76	.....	19	.....	.....	.....	.....	Ruth Palmer.
Fort Simcoe	Yakima	1,427	18	.....	.....	.....	.....	.....	.....	.....	4.53	− 0.97	0.50	2.5	7	0	14	16	w.	Richard Newmark.
Gerome	Stevens	1,200	1	38.1	.....	55	6	22	21	32	4.92	.....	0.86	5.5	14	2	16	12	.....	W. W. King.
Goat Lake	Snohomish	2,900	4	.....	.....	.....	.....	.....	.....	.....	19.54	.....	3.49	37.5	22	....	....	....	.....	C. M. Mackintosh.

TABLE 1.—*Climatological data for November, 1913. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date. Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Contd.																			
Gold Basin	Snohomish	1,360	2																U. S. Forest Service.
Gold Creek	Yakima	2,600	4							3.15		0.90	11.0	9	8	18	4		John W. Anderson.
Gold Hill	do	4,454											62.0						C. J. Vasper.
Goldendale	Klickitat	1,600	7	42.4		65	7	27	19 23	2.36	− 0.82	1.05	T.	8	1a	8a	20a	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	10							10.59	+ 2.46	1.31	0	24	2	6	22	e.	C. H. Cleaver.
Guler	Klickitat	2,200	4										20.4		3	6	21		Frank Kuehnel.
Hanford	Benton	385		43.0		63	16	24	20 29	0.75		0.29	0	7	1	20	9	sw.	Frances Lee Bash.
Hatton	Adams	1,100	8	41.5		58	24	24	12 24	1.41		0.31	T.	10	11	2	17	sw.	Wm. Goodenough.
Huntsville	Columbia	1,400	5							2.12		0.65	0	8					Mrs. S. J. Hill.
Irene Mountain	Okanogan	2,700	4							1.33		0.40	7.5	9	11	2	17	s.	Mrs. Theo. Wheeler.
Kennewick	Benton	368	18	45.6	+ 3.4	66	23†	28	12 31	1.59	+ 0.62	0.48	0	10					R. E. Reed.
Kent	King	53		44.2		59	3	27	20 28	6.46		0.80	0	21	1	6	23	s.	A. O. Jeffries.
Kettle Falls	Stevens	1,265	4	37.2		54	6	20	14 27	4.14		0.74	9.0	15	2	15	13		H. H. Cole.
Kiona	Benton	430	7	43.5		62	24†	27	3† 32	0.85		0.32	0	5	7	6	17	sw.	Dr. F. S. Hedger.
Knowlton (near)	Okanogan	3,800		39.6		69	18	18	29 43				16.7		3	8	19	nw.	W. P. Jay.
Kosmos	Lewis	775		45.2		68	12†	29	2 31	6.53		0.92	1.0	20	3	23	4	ne.	J. A. Ulah.
La Center	Clarke	250	16	42.6	− 1.0	62	8	21	13 35	8.29	− 1.06	1.07	T.	23	4	12	14	s.	Joseph Bros.
La Crosse	Whitman	1,400	4	41.6		56	17	21	21 26	2.27		0.48	0.5	14	7	5	18	e.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	4	36.6		57	1	21	2† 34	4.63		1.03	11.0	15	1	5	24	nw.	U. S. Reclamation Service.
Lake Kachess	do	2,235	5	36.0		51	1	22	3 24	3.66		1.00	17.5	18	5	1	24	w.	Do.
Lake Keechelus	do	2,479	5	35.8		51	1	24	20 21	9.14		1.90	41.2	22	5	5	20	nw.	Do.
Lakeside	Chelan	1,116	22	39.8	+ 1.8	54	1†	27	11† 24	1.98	+ 0.03	0.62	6.0	13	2	15	13	e.	W. H. Van Meter.
Laurel	Klickitat	1,900	4							7.67		1.65	16.6	18	2	14	14	w.	Mrs. M. E. Strout.
Laurier	Ferry	1,644	3	34.6		50	8	19	14 18	3.10		0.75	5.5	20	4	3	23	s.	Mrs. J. S. Myers.
Lone Tree	Chehalis	9	4	46.6		59	9	36	15† 15	16.10		1.96	0	22	0	15	15	se.	U. S. Engineer Corps.
Longmires Springs	Pierce	2,800	2																National Park Ranger.
Lost Creek	Okanogan	3,125	4																P. H. Leese.
McConihe	Grant	1,072	2	41.1		59	16	25	20 27	1.41		0.45	0.5	10	11	2	17	s.	Lucien F. McConihe.
McCumbers Ranch	Yakima	2,182	3							6.75		1.00	8.0	15	6	13	11		Mrs. Mary McCumber.
Moses Lake	Grant	1,070	2																H. M. Flemming.
Mottinger	Benton	307	13	46.5	+ 2.3	65	4†	32	20† 29	1.60	+ 0.48	0.33	0	10	13	8	9	e.	G. H. Mottinger.
Mount Pleasant	Clallam	500	2	41.8		66	9	28	21 25	6.67		1.73	T.	19	2	15	13	sw.	W. M. Dorr.
Moxee	Yakima	1,000	21	41.0	+ 1.8	58	2†	21	12 31	1.49	+ 0.29	0.53	T.	13	4	6	20		H. B. Scudder.
Newport	Pend Oreille	2,400	3	36.0		53	3	16	22 28	6.35		0.95	5.5	20	3	8	19		Chas. M. Talmadge.
Nighthawk	Okanogan	3,050	4										8.4						Steve Nagy.
North Head	Pacific	211	11	47.6	− 0.1	62	8	36	13 13	8.09	+ 1.76	1.06	0	23	6	2	22	se.	U. S. Weather Bureau.
Northport	Stevens	1,350	14	36.2	+ 1.5	52	8	23	13 21	2.84	+ 0.31	0.50	8.0	19	7	19	4		W. F. Case.
North Sundale	Klickitat		4	44.2		63	1	28	12 24	1.57		0.42	0	10					Ruth J. Shepard.
North Yakima	Yakima	1,070	4	41.2		57	4†	24	21† 28	1.49		0.42	T.	11	7	3	20	nw.	Albert Bender.
Odessa	Lincoln	1,540	10	39.8		54	8†	22	20 27	2.16		0.48	0.5	17	4	16	10	sw.	H. W. Rieke.
Olga	San Juan	50	23	45.5	+ 1.2	60	9	32	13 18	2.82	− 2.44	0.68	0	13	4	8	18	se.	Cecil S. Willis.
Olympia	Thurston	45	35	44.6	+ 0.2	58	2	30	3† 25	9.57	+ 0.16	1.20	0	21	3	7	20	sw.	C. W. Waters.
Omak	Okanogan	850	4	38.2		57	2†	19	3† 30	1.70		0.45	T.	11	8	5	17	s.	Saint John Umbrite.
Oroville	do	922	3	38.4		60	6	20	3† 33	1.95		0.50	1.5	7	9	3	18	s.	M. C. Jackman.
Peola	Garfield	4,000	4							1.97		0.45	6.8	11	8	12	10	sw.	Samuel Gruel, sr.
Pomeroy	do	1,860	21	43.2	+ 1.2	61	16	28	20 22	1.43	− 1.07	0.40	0.2	13	0	23	7	w.	Peter McClung.
Port Crescent	Clallam	259	18	41.7	− 0.6	59	15	28	13 21	9.05	+ 1.60	2.62	0	23	0	9	21	se.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	23	45.2	+ 0.2	59	3†	34	21 16	2.88	+ 0.14	0.74	0	18	2	6	22	se.	Frank Plummer.
Prosser	Benton	661		44.0		64	16	23	20 27	0.90		0.22	0	9	3	16	11	w.	E. L. Capps.
Pullman	Whitman	2,550	21	35.6	− 2.5	49	8	19	22 21	3.33	− 0.08	0.52	6.0	17	1	8	21	se.	State Agricultural College.
Queets River	Jefferson	16	2	44.6		60	3	31	21 22	20.51		2.02	T.	23	4	6	20	s.	C. A. Bullard.
Quiniault	Chehalis	300	6	45.0		60	2†	30	12† 29	26.90		2.88	0	23	3	14	13	ne.	A. V. Higley.
Reardan	Lincoln	2,510	13	36.0	− 0.1	50	2†	17	22 20	3.14	+ 0.61	0.73	3.5	14	1	4	25	sw.	Chas. Shoemaker.
Republic	Ferry	2,628	13	33.6	+ 0.6	51	6	15	14† 25	1.64	− 0.09	0.31	6.0	17	6	2	22	nw.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	6																James W. Nicol.
Ritzville	Adams	1,825	14							2.11	+0.47	0.62		13					Agent N. P. Ry.
Robertsville	Klickitat																		R. R. Couger.
Rock Lake	Whitman	1 910	7							2.92		0.91		10					H. C. Melcher.
Rosalia	do	2,425	21	38.4	+ 0.5	56	9	23	13† 22	2.92	− 0.27	0.50	2.0	17	1	10	19	sw.	Hans Mumm.
Russells Ranch	Yakima	2,870	4																Mrs. Adella Russell.
Seattle	King	248	22	46.2	+ 1.7	62	3	35	14 18	4.74	− 1.12	0.75	0	19	0	5	25	s.	U. S. Weather Bureau.
Sedro Woolley	Skagit	38	16	43.7	− 0.2	63	9	27	14 29	6.15	− 1.52	0.77	2.6	22	6	6	18		Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	6	43.4		63	24	29	20 24	1.45		0.38	0	11	1	3	26	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom	510	3	39.2		57	8	25	14 24	13.31		2.10	3.5	24	7	0	23		Skagit Power Co.
Snohomish	Snohomish	55	19	45.2	+ 0.8	68	8	29	3† 35	7.92	+ 1.38	1.09	0	22	8	3	19	s.	James Bylling.
Snoqualmie Falls	King	667	14	44.8	+ 0.2	64	8	28	14 20	7.07	− 2.33	1.19	0	24	5	2	23		O. N. Wiswell.
Snoqualmie Pass	do	3,000	4							5.25		0.60	45.0	16				e.	T. E. Steiner.
Snyders Ranch	Okanogan	2,200	4	32.8		53	2	12	13† 36	3.25		0.93	15.0	11	6	16	8	e.	Geo. M. Snyder.
South Bend	Pacific	140	18	46.2	− 1.0	65	3	28	14 28	17.91	+ 2.96	2.33	0	21	6	6	18	e.	Mrs. W. E. Buckingham.
Spokane	Spokane	1,943	32	40.6	+ 3.3	56	16	28	12 21	2.58	+ 0.28	0.93	1.4	18	1	5	24	s.	U. S. Weather Bureau.
State University	King	170	4																University of Washington.
Stokes Ranch	Okanogan	2,670	4							2.88		0.88	18.2	12	8	15	7	w.	Chas. W. Gunn.
Sullivan Lake	Pend Oreille									5.31		0.72	20.0	16	4	10	16		U. S. Forest Service.
Sumner	Pierce	77	5	44.0		60	24	24	20 32	6.62		0.75	0	21	1	5	24	n.	H. E. Thompson.
Sunnyside	Yakima	740	18	42.1	+ 1.8	62	16	23	20 31	1.15	+ 0.17	0.25	0	10	3	9	18	se.	U. S. Reclamation Service.
Tacoma	Pierce	213	27	45.3	+ 1.2	59	26	32	3 23	5.59	− 2.94	1.12	0	20	0	4	26	sw.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	28	45.8	− 0.1	58	8	36	20 14	15.06	+ 2.97	2.64	T.	24	2	12	16	e.	Do.
Tieton Canyon	Yakima	2,313	4	37.5		53	16	24	28 20	3.02		0.70	12.5	14	5	11	14	w.	U. S. Reclamation Service.
Touchet	Walla Walla	556	6	44.8		63	23	26	12 31	1.21		0.28	0	11	3	14	13	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	4							5.31		0.86	13.7	19	1	14	15	sw.	Mrs. Maude Bernard.
Trinidad	Douglas	900	9	41.7		59	16	27	21 25	1.59		0.51	1.0	5	9	6	15	e.	J. C. Wheeler.
Vancouver	Clarke	100	38	45.5	+ 0.1	63	2	26	14 28	5.91	+ 0.17	0.93	0	19	3	8	19	nw.	A. A. Quarnberg.
Vashon Island	King	40	24	44.8a	− 0.9	55a	9†	31a	20 19a	3.75	− 4.01	0.73	0	20	5	2	23	s.	Miss G. McClintock.
Wahluke	Grant	410	9	44.4		64	16	27	21 26	1.05		0.33	0	7	3	6	21		F. C. Koppen.
Wallace	Okanogan	4,000	4							2.28		0.72	13.3	14	9	6	15	s.	G. A. Wallace.
Walla Walla	Walla Walla	1,000	29	46.0	+ 3.1	62	16	34	15 21	1.91	− 0.22	0.42	T.	18	0	9	21	sw.	U. S. Weather Bureau.
Washougal	Clarke	650	13	45.4	− 0.2	61	2	30	12† 23	8.21	− 0.35	1.15	0	20	7	3	20	w.	F. M. Grout.
Waterville	Douglas	2,624	23																O. R. Hopewell.
Wenatchee	Chelan	639		42.3		59	2	25	3† 33	1.79		0.52	4.3	6	13	10	7		A. A. Piper.
Wenatchee, near	do	1,169	14	37.2	+ 0.2	51	16	23	22 22	2.04	− 0.20	0.40	8.0	12	7	7	16	w.	Geo. A. Pitcher.
White Salmon	Klickitat	325	2	44.0		60	2	31	12 20	4.72		0.84	T.	23	2	3	25	e.	C. W. J. Reckers.
Wilbur	Lincoln	2,203	14	36.9	+ 1.4	54	1†	20	19† 31	2.94	+ 1.09	0.62	3.5	10	3	3	24		R. J. Reeves.
Wind River	Skamania	1,300	2	40.9		54	2	26	14 23	16.35		2.06	5.5	23	1	10	19	sw.	U. S. Forest Service.
Winthrop	Okanogan	1,765	2	35.1		65	2	15	13† 39	2.40		0.68	18.5	17	15	4	11		Metow Trading Co.
Yacolt	Clarke	850								12.08		1.64	0	20	7	0	23	s.	C. R. Miller.
Yale	Cowlitz	375	6	44.3		61	9	30	15† 23	14.54		2.57	1.5	23	6	2	22	sw.	J. A. Williams.

TABLE 1.—*Climatological data for November, 1913. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																				
Agency Plains	Crook	2,363	....	37.6	.....	51	16	20	3	18	0.94	.....	0.22	1.0	9	7	3	20	sw.	W. S. Williams.
Albany	Linn	212	31	45.0	− 0.2	61	7	30	3	30	5.70	− 0.38	0.66	0	19	....	....	....	s.	F. M. French.
Ashland	Jackson	1,956	29	45.2	+ 0.3	74	8	25	15†	28	2.78	+ 0.34	0.68	0	13	8	6	16	nw.	Louis Dodge.
Astoria	Clatsop	16	52	48.0	+ 0.1	65	3	34	14†	19	12.06	+ 0.53	1.34	0	21	0	8	22	se.	Irving Club.
Austin	Grant	4,250	2	31.2•	.....	70•	10	10•	24	55•	1.78	.....	0.80	8.0	8	3•	0•	15•	w.	U. S. Forest Service.
Baker	Baker	3,466	23	37.6	+ 2.7	56	9	22	13	27	0.64	− 0.54	0.22	2.6	9	3	11	16	se.	U. S. Weather Bureau.
Bend	Crook	3,629	8	39.0	.....	59	16	23	4	33	1.99	.....	0.86	3.2	14	6	16	8	s.	Bend Bulletin.
Black Butte	Lane	1,200	12	41.9	− 1.7	58	8	28	18†	18	9.60	+ 1.21	1.90	1.0	16	6	12	12	nw.	William Harris.
Bialock	Gilliam	237	15	43.4[1]	− 1.8	60[1]	4†	32[1]	13	20[1]	0.92[1]	− 0.88	0.22	0	7[1]	1[1]	4[1]	16[1]	w.	Geo. W. Long.
Brookings	Curry	130	....	50.9	.....	66	1	36	30	27	12.80	.....	2.05	0	23	8	6	16	se.	Dr. C. E. Saunders.
Burns	Harney	4,157	22	39.8	+ 5.4	70	6†	10	22	50	1.08	− 0.51	0.61	2.0	4	12	6	12	.....	J. C. Welcome, jr.
Cascade Locks	Hood River	100	23	44.4	− 0.9	58	6	31	12	20	11.60	− 0.21	1.56	0	20	7	1	22	w.	Val W. Tompkins.
Cazadero	Clackamas	503	4	46.8	.....	64	3	30	12	28	6.81	.....	0.82	0	20	4	4	22	se.	Alf Drill.
Central Point	Jackson																			A. C. Fiero.
Chiloquin	Klamath	4,200	....	35.4	.....	60	7	12	14†	35	2.85	.....	1.14	4.8	15	2	8	20	sw.	H. W. Hincks.
Clear Lake	Linn	3,030	....	36.2	.....	56	7†	23	12†	26	10.97	.....	2.46	24.8	22	7	4	19	sw.	Geo. W. Hawley.
Cliff	Lake	4,300	6	39.5	.....	68	7	11	3†	47	1.40	.....	0.35	2.0	10	1	13	16	n.	John C. Green.
Combs Flat	Crook	4,027	....	38.9	.....	76	2	10	2†	66	0.32	.....	0.29	0.3	2	....	....	....	sw.	J. R. Breese.
Condon	Gilliam	2,884	6																	C. F. Kennedy.
Corvallis	Benton	266	25	46.5	+ 0.8	60	1†	31	3	27	6.01	− 0.81	0.79	0	20	3	4	23	sw.	Oregon Agricultural College.
Crescent	Klamath	4,400	1	36.2[b]	.....	64[b]	7	9[b]	3	48[b]	3.03	.....	2.10	10.0	6	4[b]	6[b]	12[b]	s.	W. W. Cryder.
Culver	Crook			40.0	.....	64	8	19	9	34	0.67	.....	0.24	0	5	24	0	6	sw.	O. C. Young.
Dayville	Grant	2,200	19	43.4	+ 0.9	73	8	20	15	26	1.46	+ 0.18	0.33	0	9	9	6	15	se.	J. Campbell-Martin.
Deadwood	Lane	350	3					33	21	....	13.13	.....	1.84	0	19	5	8	17	sw.	Supt. Salmon Hatchery.
Doraville	Columbia	600	11	43.2	− 0.6	60	8	29	14	20	9.41	− 0.03	1.45	0.7	24	3	5	22	se.	Jos. Hackenberg.
Drain	Douglas	300	11	47.6	− 0.3	68	7	34	18	24	7.03	− 0.06	1.14	0	18	0	6	24	nw.	Ira Wimberly.
Echo	Umatilla	625	9	45.5	.....	64	26	28	15†	28	1.37	.....	0.32	0	10	3	5	22	w.	R. B. Stanfield.
Ella	Morrow	830	9	44.2	.....	62	23	29	15	27	1.12	− 0.36	0.32	0	7	5	9	16	sw.	Carl F. Troedson.
Eugene	Lane	449	23	48.9	+ 2.3	71	23	29	3	24	4.91	− 0.28	0.64	0	20	1	3	26	s.	Paul G. Bond.
Folly Farm	Malheur	3,710	....	37.2	.....	60	8	6	24	49	2.51	.....	1.05	0	11	16	5	9	nw.	W. R. Gardner.
Gardiner	Douglas	72	24																	Wm. S. Angus.
Glass Buttes	Crook	4,200	....	36.6	.....	57	7	10	19†	44	1.31	.....	0.40	0	6	9	10	11	w.	C. J. Stauffer.
Glendale	Douglas	1,441	9	48.4	+ 1.4	75	9	31	2†	35	5.05	+ 0.75	0.77	0	14	6	9	15	.....	Carl Olson.
Glenora	Tillamook	575	22	43.6	0.0	58	5	25	13	23	25.67	− 0.50	3.90	0	23	5	4	21	sw.	Mrs. J. A. Reeher.
Grand View	Crook			40.4	.....	62	15	20	28	26	1.13	.....	0.32	0	7	5	6	19	s.	R. E. Osborn.
Grants Pass	Josephine	956	25	46.5	+ 1.9	69	7	31	21	36	4.40	− 0.18	0.74	0	17	0	5	25	sw.	John B. Paddock.
Grass Valley	Sherman	2,381	12	41.2	+ 2.3	61	16	26	2†	25	1.61	+ 0.04	0.55	0	9	0	8	22	nw.	Agent O.-W. R. & N.
Gurdane	Umatilla	3,500	4																	Miss Belle Ely.
Headworks	Clackamas	719	11	44.0	− 0.6	68	7	28	12†	35	9.87	− 1.47	1.50	0	21	3	4	23	e.	Portland Water Works.
Heppner	Morrow	1,950	23	43.0	− 0.7	60	16	26	20	30	1.42	+ 0.08	0.23	T.	10	3	14	13	w.	Frank Gillam.
Hermiston	Umatilla	451	6	45.5	.....	69	23	27	19	28	1.14	.....	0.32	0	10	2	13	15	.....	C. W. Kellogg.
Hillcrest Orchard	Jackson	1,595	....																	R. H. Parsons.
Hollywood Orchard	....do	1,400	....																	A. C. Allen.
Hood River	Hood River	300	23	42.3	+ 0.2	58	2	29[b]	12	23[b]	6.33	+ 0.44	2.00	0	18	2	6	22	w.	Edward W. Birge.
No. 2	....do	485	1	44.0	.....	60	2	30	12	22	3.99	.....	0.80	0	19	2	4	24	w.	C. C. Starring.
No. 3	....do	620	1	43.6	.....	59	2	26	12	28	3.43	.....	0.89	T.	16	3	19	8	se.	U. A. Newman.
No. 4	....do	850	1	41.2	.....	55	2†	27	12†	25	4.77	.....	0.80	0.2	16	5	6	19	w.	P. L. Smith.
Huntington	Baker	2,165	12	41.6	+ 0.9	58	9†	21	25	27	1.08	− 0.01	0.27	0	12	7	12	11	nw.	F. S. Bubb.
Imperial	Crook			37.2	.....	60	14	11	20	39	2.83	.....	1.89	0.2	7	11	3	16	sw.	Claud Cone.
Jacksonville	Jackson	1,640	25	44.4	+ 0.4	67	2†	29	21	30	3.90	+ 0.09	1.55	0	8	2	6	22	.....	E. Britt.
Joseph	Wallowa	4,400	24	35.4	+ 1.2	58	4	15	30	27	2.09	+ 0.11	0.74	4.0	6	5	0	25	s.	F. F. McCully.
Klamath Falls	Klamath	4,100	24	39.5	+ 0.3	63	7†	20	14†	30	1.99	+ 0.50	0.52	1.0	8	3	8	19	se.	Augusta J. Hayden.
La Grande	Union	2,784	25	41.5	+ 0.7	60	8	25	28†	26	1.10	− 1.05	0.30	2.2	7	9	10	11	sw.	W. A. Benham.
Laidlaw	Crook	3,171	....	43.2[1]	.....	65[1]	1†	20	15†	36[1]	0.42	.....	0.33	0	2	4	14	12	s.	J. W. Brown.
Lakeview	Lake	4,950	30	36.4	− 1.5	66	7	7	22	35	1.62	− 0.28	0.60	4.8	11	5	5	20	s.	C. C. Gott.
La Pine	Crook	4,230																		Albert Larson.
McMinnville	Yamhill	182	26	46.7	+ 1.5	62	3	30	20	26	7.50	− 0.98	1.00	0	21	2	1	27	sw.	M. E. Pettit.
Marshfield	Coos	34	12	49.2	.....	70	7	29	14	29	7.95	.....	0.88	0	22	7	2	21	sw.	U. S. Weather Bureau.
Meadow Brook Ranch	Hood River	850	1	42.3	.....	56	2†	29	12†	21	5.10	.....	0.88	0.2	22	1	15	14	ne.	John W. Palmer.
Medford	Jackson	1,425	3	44.2	.....	68	3	28	15	30	2.82	.....	0.81	0	19	3	16	11	se.	U. S. Weather Bureau.
Merrill	Klamath	4,070	8	37.8	.....	59	8†	12	15	38	1.44	.....	0.73	0	4	21	0	9	.....	U. S. Reclamation Service.
Metolius	Crook	2,525	3	41.2	.....	62	18	18	29	34	0.69	.....	0.34	T.	4	13	0	17	sw.	John A. Hoffman.
Miramonte Farm	Clackmas	195	25	44.8	+ 1.2	60	2†	27	14	25	6.75	− 1.14	0.92	0	20	7	2	21	s.	G. Muecke.
Mount Angel	Marion	485	27	47.2	+ 1.8	65	27	30	14	24	7.78	+ 0.45	0.92	0	17	5	5	20	s.	Dr. Urban Fisher.
Mount Hood	Hood River	1,450	2																	Isaac Beal.
Musick	Douglas	5,000	4	38.8	.....	63	8	23	13	27	14.37	.....	2.98	53.5	18	4	4	22	sw.	Alex Lundberg.
Newport	Lincoln	69	26	47.2	− 1.8	60	6†	34	14	28	14.68	+ 3.21	1.50	0	21	5	8	17	se.	William Mathews.
Odell	Hood River	1,000	1																	W. H. Chipping.
Ortley	Wasco	1,600	2	40.6	.....	54	4	30	21	19	3.16	.....	0.65	1.1	17	3	4	23	e.	L. D. Firebaugh.
Paisley	Lake	4,209	4	44.8•	.....	67•	1†	19•	14	44•	1.38	.....	0.32	2.0	8	4•	12•	9•	sw.	C. M. Sain.
Parkdale	Hood River	1,650	3	41.8	.....	57	1	26	12	22	4.34	.....	1.20	3.0	15	4	5	21	n.	S. G. Babson.
Pendleton	Umatilla	1,070	24	44.4	+ 1.4	63	23	26	12	27	1.34	− 0.41	0.38	0	13	3	10	17	sw.	E. F. Averill.
Peninsula	Crook	2,640	....	41.5	.....	59	4	27	3†	27	0.91	.....	0.31	0.5	9	4	14	12	s.	M. M. Davenport.
Pilot Rock	Umatilla	1,817	5																	John P. McManus.
Portland	Multnomah	57	43	47.6	+ 2.0	60	2	34	14	21	5.39	− 1.08	1.02	0	20	3	7	20	se.	U. S. Weather Bureau.
Port Orford	Curry	80	8	49.4	.....	64	1†	32	14	24	12.17	.....	1.54	0	20	5	7	18	n.	John D. Loucks.
Powell Butte	Crook	3,240	....	43.2	.....	62	6	21	3†	38	0.45	.....	0.30	0	2	9	17	4	w.	Earl Saunders.
Prairie City	Grant	3,425	2	40.4[a]	.....	63[a]	8	16[a]	22	40	1.41	.....	0.28	3.0	13	3	11	16	w.	A. M. F. Kirchheiner.
Prineville	Crook	2,864	17	42.2[a]	+ 3.8	67•	7	20[a]	19†	37[a]	0.70	− 0.39	0.20	1.0	5	4	9	17	s.	Mrs. T. M. Baldwin.
Prospect	Jackson	2,800	7	41.0	.....	68	3†	23	14	42	5.56	.....	1.30	4.0	20	4	8	18	sw.	Charles A. Lower.
Ramsey	Wasco	1,350	12	40.6	.....	57	22	25	21	26	2.17	− 0.09	0.65	0.2	15	8	0	22	w.	Mrs. Iva B. Collins.
Range	Grant	3,500	5	36.8	.....	58	10	14	28	35	2.10	.....	0.30	5.0	12	7	2	21	s.	Mrs. Emma Arbuckle.
Redmond	Crook	2,990	2	39.8	.....	59	4	21	19†	24	0.51	.....	0.32	0	7	8	12	10	w.	T. G. Stevens.
Richland	Baker	2,350	12	41.9	+ 3.3	60	8	20	24	30	0.20	.....	0.20	T.	1	6	8	16	e.	L. G. Morgan.
Riddle	Douglas	715	....	48.1	.....	70	3	34	19†	28	4.70	.....	0.99	0	16	2	0	28	s.	P. A. Wilson.
Rio Hermoso	Crook	2,110	2	39.6	.....	55	4	26	19	24	3.97	.....	0.80	1.6	18	4	8	18	nw.	C. T. Hubbard.
Riverside	Malheur	3,200	14	39.5	+ 3.1	60	26†	15	3†	40	1.43	+ 0.58	0.38	0	5	12	10	8	e.	Mrs. Leah Fairman.
Robbville	Crook	4,000	....	37.4	.....	61	7†	14	14	40	1.37	.....	0.61	0	5	9	13	8	n.	Loren B. Robb.
Roseburg	Douglas	510	35	47.4	+ 1.8	62	23	36	18	19	4.79	+ 0.42	1.05	0	17	0	12	18	s.	U. S. Weather Bureau.
Salem	Marion	120	23					30	3	....	5.54	− 1.26	0.81	0	19	2	0	28	s.	Henry A. Hoffman.
Seneca	Grant	4,800	2	39.2[b]	.....	49[b]	1	5[b]	23	45[b]	2.07	.....	0.66	0	9	....	....	....	sw.	E. J. Southworth.
Silver Lake	Lake	4,700	10	38.7	+ 1.9	75	1†	11	21	55	1.40	+ 0.40	0.27	T.	9	3	22	5	sw.	G. W. Marvin.
Siskiyou	Jackson	4,115	5					25	12	....	2.55	.....	0.75	14.0	10	5	1	24	nw.	U. S. Weather Bureau.
Sparta	Baker	4,150	22	36.8	+ 0.5	57	1	17	13	30	1.10	− 1.65	0.45	7.0	6	5	20	5	w.	J. A. Wright.
Stafford	Clackamas	400	17	46.0	+ 0.7	67	3	27	14	28	7.58	− 2.47	1.05	0	20	....	....	....	s.	John P. Gage.

TABLE 1.—*Climatological data for November, 1913. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon—Continued.																				
Table Rock	Jackson	1,215	....	45.4	.....	72	3	27	15†	41	2.93	.....	0.58	0	16	4	9	17	nw.	Mrs. J. C. Pendleton.
Talent	....do	1,800	....	46.0	.....	76	8	26	15	34	2.23	.....	0.55	0	11	2	2	26	nw.	T. F. Smith.
The Dalles	Wasco	112	39	45.6	+ 3.5	67	4	30	3†	32	2.21	− 0.04	0.50	0	15	3	7	20	w.	Judd S. Fish.
Tillamook	Tillamook	20	....	47.9	.....	70	7	26	13	31	15.58	.....	1.53	0	22	7	7	16	se.	Will Spalding.
Toledo	Lincoln	75	23	47.4	− 0.8	67	8	29	12	30	15.00	+ 2.59	1.80	0	18	6	11	13	sw.	C. B. Crosno.
Umatilla	Umatilla	340	25	46.2	+ 2.8	75	22	31	15†	38	1.09	− 0.08	0.20	0	10	5	1	24	e.	Mrs. H. T. Duncan.
Union	Union	2,787	2	40.6	.....	60	8†	24	12	30	1.15	.....	0.22	0	12	5	11	14	se.	Robert Withycombe.
Vale	Malheur	2,242	21	40.6	+ 3.5	59	11	17	16†	32	1.16	+ 0.18	0.26	T.	11	17	12	1	e.	H. P. Osborne.
Van	Harney	3,506	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Howe.
Vida	Lane	1,100	2	45.0	.....	66	7	31	21	26	9.88	.....	1.49	3.0	18	8	4	18	w.	W. H. Pendell.
Waldo	Josephine	1,900	1	43.6[i]	.....	61	8	30	18	21	9.35	.....	1.83	0	13	1[i]	11[i]	13[i]	sw.	W. H. Wittrock.
Waldo Lake	Lane	5,494	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Simon Klovdahl.
Wallace Orchard	Polk	170	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Charles A. Park.
Wallowa	Wallowa	2,935	10	37.6	+ 0.8	53	6	20	28	25	1.47	− 1.00	0.32	3.5	8	1	16	13	w.	L. Couch.
Wamic	Wasco	1,500	12	42.3	+ 1.5	61	16	27	3†	30	1.04	− 1.83	0.35	0	6	0	4	26	w.	A. J. Swift.
Warmspring	Crook	1,500	11	43.2	+ 1.2	62	3	23	2†	39	0.72	− 0.76	0.35	T.	9	1	19	10	w.	George W. Robbins.
Wasco	Sherman	1,263	....	44.7	.....	60	3	32	18†	22	1.76	.....	0.43	0	12	4	14	12	w.	J. R. Howell.
Weston	Umatilla	1,800	21	41.8	+ 0.9	58	4†	25	15	30	2.12	− 1.06	0.58	0.5	8	2	2	26	s.	M. A. Baker.
Whitaker	Crook	4,250	....	36.0[j]	.....	60[j]	7†	8	21	44[j]	1.11	.....	0.26	0.5	9	3	11	16	sw.	Frank Percival.
Williams	Josephine	1,368	21	45.2	+ 0.1	70	7	29	11	38	5.93	− 0.24	1.95	T.	16	3	0	27	w.	Francis J. LeRoy.
Yonna	Klamath	4,146	6	34.5	.....	62	9	9	14	50	2.09	.....	0.62	1.0	7	1	13	16	s.	Ward Rueck.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1913. District No. 12, Columbia Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Montana.																																
Anaconda	Missoula	*	.35			*	.14				*	.05						.06			.36	.04				T.	T.	T.			T.	1.00
Butte	do	.10	T.				T.				.10								T.		.16	.08						.08			T.	0.52
Columbia Falls	Flathead	.27				.15	.21				.17	.32						.26	.13		.08	*	.14				T.		.03	T.	.02	1.78
Como	Bitter Root					.35	.35				.10										.20			.08								1.08
Dayton	Flathead						.40				.25	.30							.10			.10										1.15
East Anaconda	Missoula	*	.51			*	.23				*	.09							.03	*	*	.27										1.13
Fortine	Kootenai				.08	.13	.17				.01	.02	.01			T.	.01	T.				T.	.07	.11		T.	T.	.02	.02	.01	T.	0.66
Hamilton	Bitter Root	.01				.05	.22	.01				.14							T.		T.	T.	T.					T.				0.43
Hat Creek	Missoula	.03	.48				.09				T.	.24							.10		.22	.03	T.					.11				1.30
Haugan	do	.06				.17	.70				.17	.14						.51	.09	.12	.01	.21	.18	.77	T.		.30	.15		.05	.10	3.73
Kalispell	Flathead	.16			.01	.13	.10				.24	.11						.12	.08	.02	.08	T.	.01	.06				.04				1.16
Libby	Kootenai	.10				.31	.23				.11							.13	.07	.05			.09	.29	.02	.03		.08	.01	.15		1.67
Missoula	Missoula	.15				.03	.27				.22										.14	T.		.05				.08		T.		0.94
Ovando	do		.24				.36	.02	T.			.15						.05	.02	.10	.06								.06			1.06
Philipsburg	do		.65				.15					.30							.05	T.	.05	.20	T.									1.40
Plains	Columbia	.18			T.	T.	.50				.22	.31						.08	T.	T.	.02	T.	T.	.15			.13	.06	T.		T.	1.65
Pleasant Valley	Kootenai	.05			T.	.05	.45				.07	.22						.04	.05	.04	T.	T.	.08	.10				.05		.02		1.22
Polson	Flathead	.20					.70					.10	.30	.40									.18	.06								1.94
St. Ignatius	do	.04	.45				.22				.06	.41						T.	.02	.01	T.						.15					1.36
Saltese	Missoula	.23				.22	.60				.15	.15						.32		.25	.34	.15	.30	.85			.40	.30	.10	.17	.25	4.78
Stevensville	Bitter Root		.18			T.	.21	.02		.20									.02		.11						.01				0.75
Thompson Falls	Columbia	.18				.13	.58				.18	.23									.24	.16	.07	.08	.36	.09	.18	.08		T.		2.56
Trout Creek	do											.30	.46	.21		.42	.37	.50	.20	.39		.15							.27			3.27
Victor	Bitter Root	.25	T.				.21					.14							.05		.05											0.70
Wyoming.																																
Afton	Snake		.30	.06			.42						.33		.27											.10	.05		.05			1.58
Alta	do		.46				.40					.12	.02		.12					.30	.15	T.				.25		.01	.12			1.95
Bechler River	do		.08				.25					.10	T.						.10	.05	.58	.25				.18	.02	.30	.60			2.51
Bedford	do	.11	.22				.60					.03	.26	T.	.40					.04	.10	.05				.10	.06		T.			1.97
Moran	do	.05	.15	.03			.80					.16	.01		.10				.02	.08	.04	.02	.04			.07		.02	.02			1.61
Snake River	do	.12										T.						.36	.59		.89	.51				.40	.12	.18	T.			3.17
Nevada.																																
Gold Creek	Snake		.20			.07	.20	.04				.42	.09	.26					.03		.13	.01				.01		.26			.18	1.90
Jack Creek	do		.65			.10	.28					.58	.11	.08							.24	.14				.07	T.		T.	.24	.16	2.65
San Jacinto	do	.27	.01				.10				.10	.01					.12			.04									.25			0.90
Utah.																																
Standrod	Raft		.44	.35		T.	.43					.08	.22	.10	.07						.15	.03							.06		.04	1.97
Idaho.																																
Albion	Snake																															
Almo	do																															
American Falls	do	.32					.46		.42		.50											T.						.64			.30	2.64
Arrowrock	Boise		.24	.02	.04	.84	1.02					.20						.40	.04	.02	.35	.40				.18		.21	.10	.22		4.28
Blackfoot ‖	Blackfoot	T.	.52			.07						.06								.14	.06				T.	T.					.11	0.96
Blackfoot Dam	do		.24	.15			.35					.15			.35					.05	.25	.05					.10	.08	.07			1.84
Bogus Creek	Payette	.47			.08	.84	.43				.56	.63						.38			.65	.42				.14	T.	.62	.07	.11		5.40
Boise	Boise	.18	.11		T.	.80	.08			T.	.11	.24	.01					T.	.03	.18	.53	.14				.05	.01	.20	T.	.15		2.82
Boise King	do	.02	.42		.07	.35	1.41					.44							.05		.58	.31	.08			.24		.22		.32		4.51
Bonners Ferry	Kootenai	.15				.97	.60			.10							.30	.47	.40	.42		.10	.10	.60		.10		.20	.10	.40	.10	5.11
Boulder Mine	Boise	.25	.29		.04		1.14				.09	.53						T.	.23		.72	.47	.07			.19		.69	.08	.31		5.10
Buhl	Snake		.12			.70	.10					.13			.05						.25					T.		.45		.45		2.25
Burke	Up'er Columbia																		.33	.03	.25	.05	.34	.86	T.	T.	.08	.48	.21	.12	.14	
Caldwell	Boise	.15			T.	.45	.06				.05	.17	.17					T.	.18		.35	.28				.04	T.	.11		.04		2.05
Caldwell Experiment Station.	do	.23		.01		.54	.03				.07	.17	.08						.13	.45		.23				.05	.07					2.06
Cambridge	Weiser	.05	.25			.85						.32						.05			.52		.26			.02	.46	.34		.20		3.32
Challis	Salmon	.03	T.			T.	.03				.08							T.	.03	.03												
Chesterfield	Port Neuf		.43				.42								.36						.36	T.				T.		.12				1.69
Clarks Fork	Pend Oreille	.37			.10	.69	.36	.24			.31	.07					.23	.61		.31	.23	.17	.17	.26		.13				.20	.42	4.87
Coeur d'Alene	Spokane	.35			.05	.85	.30			.15	.20							.50	.38	.05		.75	.32			.40	.20			.34	.01	
Council	Weiser	.25	.18		T.	1.28	.50				.08	.50							.39	.05	.72	.10	T.	T.		.19	.30	.59		.34		5.47
Culdesac	Clearwater	.15				.20					.42	.25							.35	.08	.02	.10	.10	.02								1.69
Deary	do	.25				.48	.22								T.		T.	.50	.24	.10	.13	1.27	.26	T.								3.45
Dent	do																															
Driggs	Snake	T.										.22			.30				T.	.23		T.				.32	T.	T.	.05	.05		1.17
Emmett	Payette	.10	.18			.32	.03				T.	.26							.16		.40	.19	.01			.10		.20		.04		1.99
Garnet	Snake		.30				.30					.15									.20									.20		1.15
Geneva	Bear						1.20																							.15	.10	1.85
Glenns Ferry	Snake		.12			.68	.24					.22									.33	T.	T.							.10		2.02
Gooding	Big Wood		.11	.10		.42	.58					.15								T.	.42	.04	.06							.25		2.34
Grace	Bear																															
Grandview	Snake	.04			.02	.01	07														.15									.02		0.31
Grimes Pass ‖	Boise	.65	T.		.01	1.70				T.		1.18						.20	.07	.41	.25	.11			.20	T.	.36		.31	.25		5.70
Guffey	Snake	.08	.22		.22	.12	T.	.02			.04	.20	.02						.03		.27	.06				.03		T.	.04			1.35
Hailey	Big Wood		.17	.07		.16	.76					.22						T.	T.		.20	.12	T.			.10		.38		.31	.11	2.60
Hollister	Snake		.40	.08		.26	.17	.04				.55		.06	.12					*	.12							.19		*	.14	2.13
Hotspring	Bruneau	T.	.26	.05	T.	.31	.05					.20		T.							.15	T.						T.		.14		1.16
Idaho City	Boise		.40				1.56					.45								.58		.72				.14		.56		.14		4.55
Idaho Falls	Snake		.15	.09				.09				.06		T.						.09	.12					.02		.07	.03	.03	.05	0.80
Indian Cove	do		.08			.53	.14					.18									.22	T.						.18		.17		1.50
Indian Valley ‖	Weiser		.46			.21	.31				T.	.36							.16	T.	.74	.08				.20	.35	.29	.30	.04		3.50
Irwin	Snake		.02			T.	.03					T.			.01				T.	T.	.02	T.	T.			T.	T.	T.	.01			0.09
Kellogg ‖	Coeur d'Alene	.12		.12		.41	.62				.28	.19						.34			.16	.03	.10	.31	.03		.22	.24	.05		.25	3.47
Kilgore	Lost River Region.																															
Kirkham	Payette		T.				.25				.15	.55					.21	T.			.38							.20	.56	.16		2.46
Kooskia	Clearwater	.35	.15			T.	.10				.20	.22						.10	.25	T.		.20		.15								
Lakeview	Pend Oreille	.26	.30	.45	.50		.75	.25				.54	.50			.54	.40	.25	.15			.10	.15	.40		.10	.15	.25	.15		.18	6.37
Landore	Snake	.18	.14		.01	1.30	.54				.01	.44						T.	.78	.15	.56	.50	.31	.14		.10		.99	.04	.05	.01	6.25
Leadore	Salmon																															
Lewiston	Clearwater	.20				.32	.04				.32	T.			T.		.08	.10	.08	.08		.03	.07	.08			.08	.02				1.50
Little Camas	Boise	T.	.40	.50	.08	.48	1.25	T.				.35						.04			.39	.16	.04			.04		.46	T.	.26		4.45
Loon Creek	Salmon	.10	.22		T.	.05	.45				.38	.33						T.	T.		.21	.12				.07		.19	T.	.05	T.	2.17

TABLE 2.—*Daily precipitation for November, 1913. District No. 12*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Idaho—Continued.																																
Mackay	Lost River Region.											.37														.17				.18		0.72
Malad	Malad																															
Meridian	Boise	.17	.12		.01	.52	.16				.17	.28	.03					T.	.11		.48	.18				.03		.16	T.	.10		2.52
Mesa ‖	Weiser	T.	.48		T.	.10	.74				T.	.31							.13	.14	.10	.27		T.		.28	.18	.65	.08	.32		3.78
Middle Fork	Clearwater																															
Milner	Snake		.15	.12		.22	.35					.36		.07	.18																	
Moore	Lost River Region.																						.32							.20		.08	.13	2.18
Moscow	Palouse	.12	.02		T.	.09	.40				.20	.15			T.			.42	.22		.23	*	.96		.01		.26	.16	T.	.02		3.26
Mountainhome	Snake		.09	.05	.07	.46	.31					.18									.35							.24		.22		1.97
Murtaugh ‖	do			.25				.60				.52			.20					T.	.27								.18		.30	2.32
Musselshell	Clearwater										.12	.39			T.			.16	.41	.01	.57	.10	.28	.35			.19	.06	.04	.07		
New Meadows	Salmon	.11	.24			.73	.65				.04	.70						.03	.36	.23	.52	.22	.13	.21		.05	.18	.40	.03	.10		4.93
Nezperce	Clearwater	.35				.04					.45						.11		.20	.08							.09					1.32
Oakley	Snake		.20	.15		T.	.44					.20		.15	.34						.65									T.	.10	2.23
O'Hara Bar	Clearwater																															
Orofino	do	.39				.32		T.			.37	.13			T.			.28	.26	.10	.29	.15	.17	.22			T.	.17	.04	T.		2.89
Paris	Bear		.10	.15			.55					.50	.09								.07											1.46
Payette	Payette	.09	.05		T.	.37	.02				.07	.12							.10		.47	.13	.05			.12	.21	.19		T.		1.99
Pierson	Salmon						.78																.21					.18		.17		1.34
Pine ‖	Boise	.23	.34			.11	1.73					.27			T.						.48	.17				.23		.46	.04	.17	.31	4.54
Pleasant Valley	do	.14	.14		.01	.49	.23						.04						T.		.48	.12				.02		.08		.13		1.88
Pocatello	Port Neuf		.61	.02		.11	.42	T.				.12	T.	.20	.02				T.		.37	.04				.01		.06		T.	.03	2.01
Poplar	Snake	.22																.64	.21											.08	1.15
Porthill	Kootenai	.10			T.	.45	.38				.05						.18	.60	.62	.07		.15	.15	.39	.50	.10	.12	.15	.15	.29		4.45
Priest River Experiment Station No. 1.	Pond Oreille	.37			.12	.82	.71				.13					.02	.06	1.20	.45	.75	T.	.05	.45	.37	.21	.11	.53	.41	.13	.43	.12	7.44
Priest River Experiment Station No. 2.	do	.36			.12	.77	.70				.13					.02	.06	1.20	.50	.38	.01	.05	.30	.41	.24	.07	.40	.44	.13	.43	.26	6.98
Priest River Experiment Station No. 3.	do	.36			.13	.78	.70				.14					.02	.15	1.27	.51	.44	.03	.05	.28	.32	.16	.09	.42	.44	.20	.42	.11	7.02
Pyle Creek	Payette	.12	.24		T.	.80	1.02				.33	.30						T.	.28	T.	.42	.18	T.			.18	.03	.52	.02	.22		4.66
Rattlesnake Creek	Boise	.03	.27		.04	.75	1.35					.35							.02		.64	.34	T.			.26		.34	.01	.10	T.	4.50
Richfield	Big Wood		.01			.20	.75	T.													.25	.05	T.			.02		.33		.15	.13	1.89
Rogerson	Snake																															
Roseworth	do		.21	.04		.13	.09					.26		.46							.07							.15		.34		1.75
Rupert	do		.24	.39	.04	.13	.40	T.	T.			.23		T.	.09	.02	T.			.02	.14	T.						.15		.07	.24	2.16
St. Michael's Priory	Clearwater	.28	.03			.02	.37				.13	.33						.06	.32	.05	.70	.10	.05					.17		T.		2.61
Salmon	Salmon		.34				.14				T.	.20									.05	.05			.03		.06			T.	0.87
Sandpoint	Pend Oreille	.28			.05	.85	.60				.20						.05	1.15	.25	.10	.10	.10	.55	.55		.10	.05	.25	.12	.25	.05	5.65
Sheep Hill	Boise	.15	.21		.02	1.34	1.58	T.		.09	.14							.14	.12		.75	.28	.04			.04		.65	.02	.35		5.92
Shoshone	Big Wood																															
Silver City	Owyhee	.35	.04		.04	.98	.30	.27			.19	.18	.05						.20		.60	.25				.10		.17		.22		3.94
Soldier Creek	Big Wood	T.	.07	T.	T.	.72	1.37					.56						T.			.42	.22	.11			.20		.75		.42	T.	4.84
Springfield	Snake		.52	.27			.24					.04									.14							.21			.13	1.55
Spring Hill	Boise	T.	.34		T.	.82	.09				.03	.30							.26		.50	.33				.03		.50		.24		3.44
Sugar ‖	Snake		.18	.13							T.	.02									.10	.05						.05			.05	0.58
Sunnyside	do	.10			.01	.56	.47				T.	.13	.01	T.	T.				.01	T.	.46	.03				.10		.16	T.	.21	.02	2.27
Tripod Mountain	Payette	.20	.17			.79	.07				.19	.53							.43		.63	.17				.23	.60			.09		4.10
Twin Falls	Snake		.03	.02		.38	.25					.35								T.	.11	T.						.30		.65	T.	2.09
Vernon	do		.85				.13					.07									.22	T.				.04		.03			.04	1.38
Weiser	Weiser	.11	.05		T.	.50	.02	T.			T.	.07	T.						.05	.09	.22	.11	T.			.06	.27	.24		.03		1.82
Wendell	Big Wood			.22		.43	.36														.24	T.						.14		.40	T.	1.79
Weston	Bear		.41	.15			.22							.85	.22						.18			T.		.03	.02	.02				2.10
Washington.																																
Aberdeen	Coast			.01	1.28	1.42	.02	.62		.69						.37	1.72	.26	.10	.88	.45	.46	1.02	1.82	1.30	1.16	.60	.69	1.21	1.33	.17	17.58
Anacortes	Puget Sound																															
Anatone	Snake	T.	.14			.50	.40				.37	.20			T.			.22	.13	.15	.24	.40	.40					.92	T.	T.		4.07
Baker	Puget Sound				.20	1.30	.70	.10		.70						.30	.80	.20		.60	T.	.70	.50	.80	1.20	.30	.10	.50	.20	1.60	.60	11.40
Bellingham	do				.19	.30	.05	.04		.20						.11			.03	.06	.14	.12	.02	.32	.04	.11						1.73
Bellingham (near)	do																															
Blaine	do				.17	.27	.18	.07		.21						.22	.56	.10	.15	.24	.22	.21	.19	.90	.80	.30	.01	.16	.32	.32	.01	5.61
Blewett	Wenatchee				.05	.65	.90	.12	.05							.14	.34	.12	.14			.10	.40	.30	.11	.07				.80		4.29
Bremerton	Puget Sound				.24	.73	.38	.18			.13							.97	.08	.34		.17	.34		1.70	.40	.12		.36	1.00		7.14
Brewster	Columbia	T.			T.	.47	.30	T.		T.								.12	.07		.07		.10			.07	T.	.17	.06	.70		2.13
Buckley	Puget Sound	.05			.34	.49	.47	.21		.39	.08					.16	.81	.67		.10	.08	.11	.25	.32		.06	.08	.23	.22	.07	.07	5.26
Bumping Lake	Yakima																															
Centralia	Coast			T.	.23	.63	.30		.50						.10	.05	.45		.02	.35	.13	.31	.37	.74		.33	.05	.93	.57	.04	.12	6.22
Clearbrook	Puget Sound	.01			.39	.64	.21	.04		.50						1.04	.10	.18			.55		.16	.70	1.58			.47	.18	.50	.03	7.28
Cle Elum	Yakima				.07	.10	.50	.07		.02							.19	.07		.38	.04		.26	.09			.04	.17		.65	.13	2.78
Colfax	Palouse	.28			.05	.30					.43								.22	.15	.15		.50			.40		.10	.15			2.73
Colville	Columbia	.06			.06	.46	.25			.04								.35		.06		.15	.20	.35	.19	.04				.40	.09	2.70
Conconully	Okanogan				.03	.26	.26	.11								T.	.15	.14		.12		.05	.08	.18			.17	.62	.05	.95		3.17
Coulee City	Columbia					.53	.23			.04								.35	.61					.11	.04			.24		.67		2.82
Cowiche	Yakima					.23	.03									*		.35					.02			.03			.40	.27		1.33
Darrington	Puget Sound				.38	1.34	1.35	.25		.55						2.10	.75	.35	.08	.40	.15	.30	1.50	2.10	2.10	.45	.21	.70	.25	1.90	.48	17.69
Davenport	Columbia	.25			.08		.75				.05							.62	.03	T.		.10	.20	.31	.03	T.	.11			.43		2.96
Dayton	do	.10			.02	.27	.09				.07	.10			.01			.22	.16	.07	.14	.22	.10	.05			.21	.15	.05	.09	.01	2.13
Deer Park	Spokane	.42			.21	.26					.10						.20	.50	.13	.19		.15	.27	.60	.05	.10	.03	.13	.12	.35	.10	3.91
Detroit	Puget Sound				.77	1.00	.22	.40		.35						.40	.87	.21	.12	.51	.16		.50	1.50	.37	.30	.08	.52	.67	.61		9.56
Douglas Lake	do																															
Dryden	Wenatchee	.01			.02	.42	.50	.55	T.		.02			.02	.01	.02	.07	.32	.07	.08	.02	.02	.18	.30	.02	.09	.01	.14	.14	.44		3.47
Duckabush	Puget Sound																															
Ellensburg	Yakima	.06				.17	.06			.02								.19	.21	T.			.03	.05		.03		.04	.23	.26		1.35
Eltopia	Columbia																															
Forks	Coast				2.22	.12	.51		.29						.51	1.30	1.05	.29		1.70	.66	.32	.95	2.25	2.76	1.55	.81	1.57	.58		1.76	21.20
Fort Simcoe	Yakima	.28	.30					.10			T.				.10													.50	.10	.15		1.53
Gerome	Columbia				.10	.86	.46			T.								.38	.42	.06		.20	.30	.80		.11	.13	.25	.18	.67		4.92
Goat Lake	Puget Sound	.36			.36	.28	1.98	.21	.18	.41	.56					.05	3.22	.51	.28	.23	.80	.48	.79	.48	3.49	.13		1.13	2.30		1.31	19.54
Gold Basin	do																															
Gold Creek	Yakima					.90											*	.70				.05	.10	.60		.15	.15		.50			3.15
Goldendale	Columbia					1.05		.15		.05								T.	T.			.44		.20			.02	T.	.40	.05		2.36
Granite Falls	Puget Sound	.10			.34	.94	.32	.11		.32	.49				.31	.30	.97	.37	.10	.51	.11	.50	.71	.61	.79	.60	.12	.10	.30	1.31	.26	10.59
Hanford	Columbia				T.	.29				T.	.02							.16	.04	T.						.10		.04	.10			0.75
Hatton	do	.18				.31	.14				.12	.68						.21	.08	T.		T.		.11			T.		.10	.08		1.41
Huntsville	do	.10				.35	.16				.10							.40	.08	.28								.65				2.12
Irene Mountain	do				T.	.40	.05	T.	T.									.23	.12			.02	T.	.08	T.	T.	.05	.18	T.	.20		1.33
Kennewick	do	.20				.10	.20	.19			.09	.04	T.					.20									T.	.48	.03	.06		1.59

TABLE 2.—*Daily precipitation for November, 1913. District No. 12*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
Washington—Contd.																																
Kent	Puget Sound				.44	.80	.75	.14		.46	.11					.07	.62	.30	.10	.22	.10	.04	.20	.48	.55	.23	.09	.32	.22	.22		6.46
Kettle Falls	Columbia	.08				.68	.25				.06							.40	.74			.07	.11	.40	.30	.10	.13	.35		.45	.02	4.14
Kiona	Yakima	.25				.32					.03							.12									.13					0.85
Kosmos	Columbia				.44	.46	.21	.17	.09		.44	.20	.03			.08	.17	.86			.34	.39	.48	.92	.35	.28	.11	.37			.14	6.53
La Center	do			.25	.56	.78	.19	.01	.05	.64						.10	1.07	.01	.06	.28	.40	.20	.70	.01	.04	.70	.38	.44	.81	.40	.21	8.29
La Crosse	Palouse	.23			T.	.48		T.			.20	.14				T.		.19	.11	.03		.11	.15	.10		T.	.38	.11	.01	.03		2.27
Lake Clealum	Yakima			.02	T.	.52	1.03	.14	.03	T.	.04	T.	T.	T.		.53	.13	.14	.07	.42	T.	T.	.73	.31	T.	T.	T.	T.	T.	.24	.28	4.63
Lake Kachess	do				T.	.68	1.00	.06		.05	.05					.10	.30	.10	.10	.15		.06	.13	.20		.10	.08		.15	.20	.15	3.66
Lake Keechelus	do	.02			.24	1.47	1.90	.33		.01	.20					.11	1.08	.41	.01	.56		.40	.88	.50	.10	.02	.12	.10	.48	.05	.15	9.14
Lakeside	Columbia				.43	.25		.05		T.						T	.02	.11	.05			.05	.10	.09		.01		.06	.14	.62		1.98
Laurel	do	.09			.05	.85	.60	.33		.14							.15	.50		.26	.05	.09	.20	.81		.16	.20	.80	.74	1.65		7.67
Laurier	Kettle	.05				.75	.25	.02			.10					.05	.01	.34	.12	.12		.13	.05	.21	.33	.03	.13	.17	.02	.17	.05	3.10
Lone Tree	Coast		.01	T.	1.10	1.21	.62	.03	T.	.31						.40	1.96	.57	.24	1.12	.90	.12	1.04	1.48	1.72	.74	.30	.63	.73	.82	.05	16.10
Longmires Springs	Puget Sound																															
Lost Creek	Columbia																															
McConihe	Columbia	.03				.30	.12			T.								.45	.20			.06		.03			.05	.02	.15		1.41
McCumbers Ranch	do					.80	.80	.30			.10						.05	.60		.05		.10	.60	.60		.10	.30	.70	.65	1.00		6.75
Moses Lake	do																															
Mottinger	do	.33		T.	T.	.29	.07				.13	.05				T.		.12	.13			.02		T.			.26			.20		1.60
Mount Pleasant	Coast				.11	.36	.20	.07		.38	.02					.08	1.33	.13	T.	.29	.04	.02		1.73	.43	.19	.05	.21	.13	.90		6.67
Moxee	Yakima	.05				.25	.05	.02		.04	.02			T.			T.	.53					.03			.02	.01	.01	.14	.32		1.49
Newport	Pend Oreille	.41			.09	.78	.55				.12						.12	.95	.17	.09	.20	.09	.58	.46	.11	.16	.21	.52	.16	.42	.16	6.35
North Head	Coast			.17	.91	.30		.47	.11	.69	.01					.15	.81	.21	.12	.34	.48	.25	.40	.54	.24	.30	.45	.34	.58	.18	.04	8.09
Northport	Columbia	.01		.02	.50	.33	.02	T.		.13	T.				.06		.27	.25	.05	.08	.15	.10	.08	.35	T.	.05	.15		.20	.04		2.84
North Sundale	do	.24				.42		.23			.07							.02	.20		.01			.11					.28	.09		1.67
North Yakima	Yakima	.06			T.	.20	.02	T.		.04	T.						T.	.42	.15				.01	.02		T.	T.	.03	.15	.39		1.49
Odessa	Columbia	.18	T.		.06	.48	.03			T.	.03	.04					.09	.42	.09	.02		.05	.12	.08	.01	T.	.05	.15	T.	.26		2.16
Olga	Puget Sound			T.		.51	T.			.19						.26	.42	.06			.08		.23	.44	.22			.17	.10	.08	.06	2.82
Olympia	do				.60	.87	.76	.32		.50	.05					.24	.78	.50	.10	.50	.20	.10	.40	1.20	.10	.35	.10	.53	.60	.77		9.57
Omak	Okanogan				.03	.22	.21											.11	.03			.03	.06	.22	T.	.09	.25			.45		1.70
Oroville	do					.20	.10																.30	.10	T.	T.	.30	.50			.45	1.95
Peola	Snake	.23				.19	.10				.25	.15			.05	.10							.42	.45						.02	.01	1.97
Pomeroy	do				.30	.05	T.				.10	.40	.05	T.	T.	.05	T.	.10	.05			.02	.10				.05		.06	.10		1.43
Port Crescent	Coast			.03	.41	.12	.05	.08	.16	.28	.01					.86	1.17	.12	.01	.53	.07	.04	.26	2.54	.17	.61	.15	.42	.38	.58	T.	9.05
Port Townsend	Puget Sound		T.	T.	.28	.02	T.	.02		.15	T.	.01				.01	.43	.02		.12	.08	.10	.02	.21		.15	.10	.16	.26	.74		2.88
Prosser	Yakima	.20				.19			T.	.03	.02	.05					T.	.05	.08					.06		T.	T.		T.	.22		0.90
Pullman	Palouse	.13	.03			.42	.05				.23	.03					.05	.39	.07	.31		.52	.47	.15			.23	.22	.01	.02		3.33
Queets River	Coast	.08	T.	T.	1.16	.73	.06	.42	.01	.64	T.	T.	T.			1.48	2.02	.18	.18	1.10	.66	.36	1.35	1.64	2.02	1.67	.73	1.20	.92	1.75	.15	20.51
Quinialult	do	.03			1.90	.72	1.00	.82	.03	1.33						2.00	2.08	.25	.30	.79	.78	.34	1.01	2.88	2.35	1.86	.83	1.50	1.40	2.60	.10	26.90
Reardan	Spokane	.15			.08	.73	.30				.05							.57	.08		.05	.10	.23		.30		.18	.12		.20		3.14
Republic	Kettle	.02			.03	.25	.03				.06						.02	.20	.20	.03		.06	.06	.20	.04	.04	.03	.06		.31		1.64
Rex Creek	Columbia																															
Ritzville	do	.34				.62		.12		.07	.04								.06	.30			.08	.08	.12	.08	.08		.12			2.11
Robertsville	do																															
Rock Lake	Palouse	.34			.05	.91				.06									.60					.10	.53	.10		.12	.11			2.92
Rosalia	do	.28			.03	.50	.25				.21	.30						.35	.15	.16		.13	.20	.09	.02	.04	T.	.08		.11	.02	2.92
Russells Ranch	Yakima																															
Seattle	Puget Sound			.20	.44	.57		.12	T.	.19						.20	.22	.28	T.	.12	.23	.04	.14	.74	.12	.47	.12	.12	.40	.02	T.	4.74
Sedro Woolley	do				.23	.72	.12	.34		.36	.08					.36	.51	.11	.11	.15	.26	.44	.30	.30	.10	.09	.05	.37	.08	.77	.30	6.15
Sixprong	Columbia	.38				.32	.06				.07							.11	.07					.10		.05		.06	.11	.12		1.45
Skagit Power Dam	Puget Sound	.14			.20	1.00	1.22	.16	.01	.25	.37					.97	2.10	.28	.10	.71	.04	.25	.66	.96	1.35	.22	.30	.38	.10	1.24	.30	13.31
Snohomish	do				.22	.79	.20	.15		.08	.78					.17	1.09	.35	.17	.20	.28	.25	.52	.66	.42	.29	.15	.27	.14	.64	.10	7.92
Snoqualmie Falls	Puget Sound	.01	.02		.10	1.19	.59	.02		.22	.13					.10	1.00	.50	.02	.30	.05	.15	.44	.43	.30	.33	.16	.39	.14	.34	.14	7.07
Snoqualmie Pass	Yakima	.10	.30		.15		.20	.40	.20		.40	.40			.20		.40		.40			.40		.40		.40			.30	.60		5.25
Snyders Ranch	Columbia					.10	.58	.05								.10	.33	.10		T.			.07	.30	T.	T.	.30	.39	T.	.93		3.25
South Bend	Coast				1.04	1.73	.65	.41		.93	.04						2.33	.22	.27	1.13	.23	.37	1.31	1.48	1.25	.80	.28	1.42	.32	1.53	.17	17.91
Spokane	Spokane	.39			.13	.82	.01	T.		.09	.02	.01					.32	.08	.01	.06		.06	.11	.31		.02		.04	.03	.07		2.58
State University	Puget Sound																															
Stokes Ranch	Columbia				.05		.18	.40								.10	.44		.04	.10	.07		.18	.24			.20		.88		2.88
Sullivan Lake	Pend Oreille	.15			.20	.72	.28										.25	.50		.30		.40	.60	.40	.60		.21	.12	.20	.30	.08	5.31
Sumner	Puget Sound				.36	.75	.44	.21		.56	.06					.29	.58	.63		.15	.23	.02	.37	.40	.28	.29	.32	.35	.20	.09	.04	6.62
Sunnyside	Yakima	.20				.22					.09	.02						.25	.10			.01	T.	.05					.04	.17		1.15
Tacoma	Puget Sound			.19	.57	1.00	.02	.23		.40						.26	.45	.29	T.	.17	.06	.03	.08	.54	.22	.32	.14	.13	.38	.11	T.	5.59
Tatoosh Island	Coast			.27	.86	.60	.04	.15	.20	.36					.05	1.48	.33	.34	.03	.62	.86	.28	.44	2.14	1.97	.79	.69	.49	1.02	.93	.12	15.06
Tieton Canyon	Yakima	.13			T.	.24	.15	.13		.04	T.	T.				T.	T.	.30		.02		T.	.11	.12		.14	.06	.28	.70	.60		3.02
Touchet Columbia	Columbia	.19			.02	.28	.06				.01			.04		T.		.16	.20	T.			T.			T.	.05	.11	T.	.09		1.21
Touchet Ridge	do	.26	.04	.05		.80	.19	T.			.19	.16		T.				.31		.10	.86	.42	.55	.63		.08	.15	.12	.08	.27	.05	5.31
Trinidad	do					.49													.40				.10	.09					.51		1.59
Vancouver	do	.60			.29	.93		.20		.15						.03	.60	.26		.10	.10	.25	.37	.48		.25	.21	.39	.28	.40	.02	5.91
Vashon Island	Puget Sound	T.			.10	.05	.04			.19	.10	T.				.17	.73	.05	.24	.20	.15	.10	.26	.01	.15	.34	.06	.42	.38		.01	3.75
Wahluke	Columbia	.05				.05	.29	T.										.33	.08	T.							T.	.10	T.	.15		1.05
Wallace	Okanogan				.02	.34		.10								.06	.09	.10	.06	.02		.15		.04	.25		.17	.26		.72		2.28
Walla Walla	Columbia	.08			T.	.42				.04	.09	.04	T.	.05		T.	.14	.22	.07	.08	.14	T.	.11	.07		.04	.05	.17	.02	.08		1.91
Washougal	do	.50				1.15	.60	.90		.18	.10					.50	.40		.25	.10	.24	.25	.40	.85		.20	.06	.45	.35	.48	.25	8.21
Waterville	do																															
Wenatchee	do					.06	.52										T.		.40				12					.37		.32		1.79
Wenatchee (near)	do	.02			T.	.30	.27	.03		T.						T.		.40	.04			T.	.11	.06		T.	.07	.26	.15	.33		2.04
White Salmon	do	.08			.05	.84	.44	.35		.05	.01				.02	.02	.03	.20		.20	.05	.34	.42	.38	.03	.09	.02	.12	.28	.66	.04	4.72
Wilbur	do	.01			.62	.31				T.						.46		.33		T.		.18		.35	T.	.03	.22	T.	.43			2.94
Wind River	do	.38			.51	1.55	1.16	.40		.29	.12	.02				.03	.53	.97	.03	.81	.27	.57	1.91	2.06	.02	.42	.92	.76	.92	1.70	T.	16.35
Winthrop	do		.01		T.	.06	.40	.06	.01	T.						.08	.06	.08	.09	T.	.03		.10	.11	T.	.01	.16	.41	.05	.68		2.40
Yacolt	do	.09			.53	1.47	.15	.23		.52	.03						.53	.59		.96	.40	.39	1.64	1.08		.70	.26	1.17	.26	.85	.23	12.08
Yale	do	.45			.79	1.44	.30	.48	.02		.57	.02					.02	.67	.01	1.09	.50	.80	2.57	1.25	.01	.60	.17	.80	.42	1.06	.50	14.54
Oregon.																																
Agency Plains	Deschutes	.22				.21	.06	.01			.04	.09							T.	.05		T.				T.	T.	.20	.06			0.94
Albany	Willamette	.53			.38	.07	.66	.19		.05	.02								.49	.13		.37	.54	.18	.36		.01	.18	.12	.54	.55	.33	5.70
Ana River	S. E. Drainage	.05				.10	.32													.01	.01							.02				0.51
Ashland	Rogue	.20				.42	.50			.04	.02	T.	.04						.12	.15	T.	.68	.03	T.			T.	T.	.35	.03	.20		2.78
Astoria	Columbia	T.	T.	.01	.68	.97	.06	.53	T.	.61	T.	T.				.06	.97	.45	.10	.99		.53	1.14	1.21	.14	.72	.12	1.34	.32	.97	.14	12.06
Austin	John Day										.80	.13									.13	.17	.11	.08				.25		.11		1.78
Baker	Snake	.14				.14	.08	T.			.03	.02				T.	T.		T.			.12	T.	.06		T.		.04	T.	.01		0.64
Bear Creek	Deschutes	.13				.12	.08	.06			.12	.18							.09			.15	.02						.15			1.10
Bear Valley	S. E. Drainage	.18				.73	.07	.09			.20								.10			.45	.12	.07		.06			.18			2.25
Beech Creek	John Day	.25				.65						.20							.45			.40		.10					.20			2.25
Bellfountain	Willamette	.38		T.	.20	1.24	.80	.09		.09	T.						.19	.79		.40	.46	.32	.32	.18		.64	.11	1.11	.40	1.50	.02	9.24
Bend	Deschutes	.26	.21			.26	.86	.05		.06	.06	.05	.01				.02			T.	.01		T.	.01			T.	.08	.05			1.99
Big Basin	John Day	.06										.05									.06	.05	T.						.01			0.23
Black Butte	Willamette	.45				1.40	.70	.15		.25							.10	1.90			.85	.60	.15	.20		.25		.90	.25	1.30	.15	9.60
Blalock	Columbia	.25					.20	.04		T.	T.						.06	T.	.04		T.		.11						.22			0.92

TABLE 2.—*Daily precipitation for November, 1913. District No. 12*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon—Continued.																															
Blue Mt. Sawmill	Umatilla	.15				.95					.20	.20						.40	.20	.10	.30			.45	.15	.10		.70				3.90
Brookings	Coast	1.05	T.	.26	.54	2.05	.59	.19	.03	.49	.06	.07	T.	T.				1.00	.01	.22	1.39	.14	.42	.16	T.	1.41	.46	.80	.31	1.13	.02	12.80
Buena Vista	Snake											.30					.10		T.				.20					T.	T.			0.60
Burns	S. E. Drainage					.61	.10													.27	.10											1.08
Burns Mill	....do																															
Butte Falls	Rogue	.04			.04	1.51	.82	.04		.15	.01		.16					.25	.06	.07	.73	.04	.03			.10		.22	.01	.32	T.	4.60
California Gulch	Umatilla		.18		.15							.30						.38		.12			.23				.38		.22			1.96
Cascade Locks	Columbia				.37	1.32	.58	.50		.26	.11						.44	.62		.82	.24	.87	1.36	1.56	.03	.26	.09	.55	.49	.90	.23	11.60
Cascadia	Willamette	.18			.36	1.05	.34	.12		.21	.30						T.	.41		.59	.69	.57	.25			.21	.07	.48	.20	.76	.05	6.84
Cazadero	....do	.45			.32	.82	.68	.16		.18	.28						.53	.46		.16	.38	.17	.39	.61		.15	.02	.32	.27	.45	.01	6.81
Chiloquin	Klamath	.18			.12	1.14	.35				.02	T.	T.				T.	T.	.27	.01	.39	.05	.03	.01		.03	T.	.15	.05	.05			2.85
Clear Lake	Willamette	.28			.17	2.46	.89	.38	.03	.23	.20	.02					.22	.31		.31	.60	.78	.80	.50		.20	.38	.63	.57	.99	.02	10.97
Cliff	S. E. Drainage	.23	.05				.35	.06		.11			.33							.10	.09	.03							.05			1.40
Columbia Mine	Snake	.20				.60		T.			.15	.20							.20	.10	.30	.50	.40				.20	.30		.60		3.75
Combs Flat	Deschutes					.29												.03														0.32
Coquille River L. H	Coast	1.06		T.	.27	.75	.74	.05									.81			.35	.62	.21				1.47		1.37	.20			7.90
Cornucopia	Snake	.22	.18		.05	1.74	.73				.08	.16						.03	.74	.34	.54	.61	.74	.07		.03	.55	.92	.05	.67	.02	8.47
Corvallis	Willamette			.05	.48	.92	.15	.07		.06							.21	.48	.01	.24	.33	.31	.30	.24		.29	.10	.44	.24	.79	.30	6.61
Cracker Creek	Snake	.30			T.		T.	T.			.30							T.	T.	T.	.20	.20	.20			T.	T.	.10	T.	.60	T.	1.90
Crescent	Deschutes	.13					2.10				T.							.25			.26	.22	.07									3.03
Culver	....do		.24	.13					.10													.11						.09			0.67
Dayville	John Day	.22			T.	.33	T.				.18	.15					T.	T.	.14	T.	.23	.03	T.			.13	T.		.05			1.46
Deadwood	Coast	.33			.86	1.84	.55	.32		.56						T.	1.72	.04		.64	.82	.79	.98	.25	1.08		.47	.74	.60	.48	.06	13.13
Diamond	S. E. drainage	.30	T.	T.		.25	.12		T.		.12		.08						.07		.15					T.		T.	T.			1.09
Doraville	Columbia	.23		.01	.33	.94	.62	1.15		.32	.02					.03	.79	.65	.02	.38	.12	.46	.53	.46	.02	.16	.26	.97	.43	.45	.06	9.41
Drain	Umpqua	.31			.24	1.14	.46	.13		.25	.01							.52		.32	.92	.40	.14			.15	.14	.65	.08	1.11	.06	7.03
Dufur	Columbia	.07				.79	.16	.10		.04	.02			.03	.03			.16	.03	.01	T.	T.	T.			.13	.08	T.	.37	.15		2.17
Echo	Umatilla	.25				.32					.15	.05						.13		.15			.02				.18	.08	.04			1.37
Ella	Columbia	.30				.32						.10								.12				.15			.03	.10				1.12
Embody	S. E. drainage	.08	.06	.02	.10	1.80	.88	.05		.12	.03		.19							.10	.20								.05	.10		3.78
Eugene	Willamette	.38			.21	.64	.29	.08	.03	.10	.06	.01						.26			.16	.26	.42	.06			.17	.05	.46	.51	.57	.19	4.91
Fir Glen	Coast	.50	.02	.07	.10	1.89	.99	.15		.15	T.		.05				.01	.40		.60	.80	.58	.25	.03		.25	.28	.89	.25	1.52	.09	9.87
Florence	....do	.35		.28	.14	1.05	.78	.14		.38							.08	1.90	.74	.63	.14	.99	.19		1.04	.48	.52	.50	.48	.21		11.02
Folly Farm	Malheur		.16		.26	.07	1.05	.07		.25		.13	.07					.16			.23					.06						2.51
Fort Rock	S. E. drainage	.11			T.	.55	.10			T.	.20		.28				T.	.05	T.	T.	.07					T.	T.		T.	T.		1.36
Galice	Rogue	.47		T.	.09	1.73	.30	.05		.02	.01	.01						.68		.05	.65	.14	.05	.01		.51	.78	.25	.28	1.46		7.54
Gibbon	Umatilla	.15				.32	.18				.30	.05						.43	.37		.63	.32	.50				.31		.14			3.70
Glass Buttes	Deschutes		.35				.40		.22		.05							.19											.10			1.31
Glencoe	Columbia	.35				.21	T.			.07								.05	.15		.02						.13		.02			1.00
Glendale	Umpqua			.35	.25	.65	.20										.10	.50	.15	.10	.10					.77	.55	.08	.95	.30		5.50
Glenora	Coast			1.20	.45	3.90	1.10	.39		.51	.10					.08	2.01	.82	.06	.90	.63	.90	2.00	3.40	.03	.94	1.26	1.34	2.15	.85	.65	25.67
Golden Falls	....do	.76		.05	.10	2.14	.78	.51		.48	.03							.86	.01	.58	.91	.55	.49	.07		.63	.12	1.10	.08	1.10	.06	11.41
Grants Pass	Rogue	.19			.14	.73	.17			.01	.13		.07	T.				.50	.04		.64	.10				.25	.23	.39	.05	.74	.02	4.40
Grass Valley	John Day		T.		.55		.13		T.	.09				.03					.30					.15	.05			.23	.08			1.61
Greenhorn	Snake	.30				.70	T.	T.	T.		.25	.05						T.	.26	.30	.40	.60	.48	T.	T.	.20		.50	.15	T.		4.19
Gumboot	....do	.10	.19			.69	.39				T.	.18							.45	.05	.29	.40	.28			.05	.35	.80	.05	.29		4.56
Happy Home	Umpqua	.85			.08	1.42	2.65	.12	.35	.08	.04						.04	1.48	.07	.22	1.10	.65	.54	.18	.40	1.55	1.38	1.78	.55	2.74	.08	18.35
Hazeldell	Willamette			.17	.21	1.56	.43			.29	.20						.07	.14		.61	.48	.20			.22	.21	.15	.59	.23	T.	5.76
Headworks	....do	.79			.50	.40	.85	.39		.44	.29					.03	.80	.30	T.	.35	.40	.40	1.50	.52	T.	.30	.20	.45	.30	.38	.28	9.87
Heppner	Columbia	.21				.25		T.			.21	.01						.16		.21		T.			.14	.17	.03	.05			1.42
Hermiston	Umatilla	.27				.32	.01				.08	.02	T.			T.		.08	.05	T.						.17		.06	.08		1.14
Hilgard	Grand Ronde				T.	.10	.40				.20							.05	.20	.20	T.	.10	.05	T.	.20	T.	T.		.05			1.55
Hood River	Columbia				.10	.95	.45	.40	.09								.02	.10	.19	.20	.05	2.00	.40	.45	T.	.12	T.	.20	.25	.31	.05	6.23
No. 2	....do	.25			.07	.80	.38	.37		.03	.01				T.	T.	T.	.17		.19	.02	.29	.39	.33	T.	.08	.02	.15	.19	.23	.02	3.99
No. 3	....do	.03				.89	.43	.31	.02		.04							.19		.18	.05	.15	.27	.39		.13		.09	.09	.17		3.43
No. 4	....do				.25	.80	.68	.31		.07								.23		.17	.05	.23	.48	.25		.15	.15	.25	.20	.20		4.47
Hoover	Willamette	.21			.22	1.74	.71	.23		.19	.10	.02						.51	.07	.40	.49	.42	1.21	.75		.24	.33	.77	.68	1.28	.27	10.84
Howardville	Grand Ronde	.22				.67	.15				.62	.06						.11	.20	.14	.22	.25	.29					.16	.07			3.16
Huntington	Snake				.03	.01				.19		.03							.05	.04	.27	.01				.11	.20	.08		.06		1.08
Ibex Mine	John Day	.14	.04			.50	.11	.05			.22	.11							.15	.16	.14	.10	.25	.07		.04	.07	.60	.05	.71	.03	3.54
Imperial	Deschutes	.11			.07	.15	.14	.18	.29			1.89									T.	T.	T.								2.83
Ironside	Snake	.10	.05			.05	.05				.05	.03							.05			.05			.05	.12					0.60
Jacksonville	Rogue	.11				1.55	.22				T.	T.	T.					.38		.05	.63					T.		.40		.56		3.90
Joseph	Grand Ronde				.60	.25					.74	.10								.30	.10											2.09
Klamath Falls	Klamath	.50			T.	.52	.34				.05		T.						.16		.19							.18		.05		1.99
La Grande	Grand Ronde	.10				.15	T.				.30	.05									T.	.20	.15	.15								1.10
Laidlaw	Deschutes					.33	T.			.09	T.																					.42
Lakeview	Pitt	.60	.01		T.	.38	.04	.01			.08	T.	.04						.22	T.	.16	T.						.02		.06		1.62
Lilyglen	Rogue	.13			.04	.07	.53	.93	T.		.02	.13	.04					.07	.24	.39	.80	.19	.02	.02	.01		T.	.02	.37	.40	.17	4.89
Long Creek	John Day	.24				.58	.08	.08			.10	.04							.10	T.	.27	.05	.05	T.		T.		T.				1.59
McMinnville	Willamette	.52		.05	.37	1.00	.25	.05		.13	.03					.04	.61	.44		.31	.28	T.	.73	.32	.43	.24	.54	.31	.83	.02		7.50
Marshfield	Coast	.87	.01	.04	.34	.88	.72	.10		.10	.02							.73	.03	.29	.73	.12	.36	.11		.81	.15	.72	.10	.66	.06	7.95
Maury	Deschutes	.16	T.		T.	.76	.33	.05			.18	.12							.17		.15	T.	.13	T.		T.	T.		.05	T.		2.10
Meadow Brook Ranch	Columbia	.05				.88	.79	.42		.08	.03							.24		.25		.30	.42	.50	.01	.15	.17	.15	.30	.29	.07	5.10
Medford	Rogue	.09			.04	.26	.40	.01		.03	T.	.03	.10					.20	.20	.02	.81	.01				.04	.02	.20	.04	.30	.02	2.82
Merrill	Int. drainage	.73					.26												.25		.20											1.44
Metolius	Deschutes	.34				.20				T.	.12		T.					.03			T.											0.69
Miramonte Farm	Willamette	.65			.28	.92	.30	.13		.18	.04						.39	.56		.31	.21	.10	.55	.41		.28	.08	.67	.20	.48	.01	6.75
Mountain Home	Columbia	.16			.44	.68	.82	.22	T.	.30		T.				.04	.62	T.	.58	.13	.62	.86	.90		.39	.26	1.02	.33	.15			8.52
Mount Angel	Willamette	.76			.26	.92	.86			.30							.55	.61		.30	.28	.29	.48	.28		.21	.24	.64	.17	.63		7.78
Mountain Ranch	Rogue										.15	.24						.95		.38		.20	.30	.50	.20	.40	.15	.10	.08	1.00	.60	5.25
Musick	Umpqua	.31			.82	2.98	1.87	T.		.40	.49						.60	T.		.62	.70	1.19	.21	.16	.80	.32	.27	.30	1.02	1.31		14.37
Newport	Coast	.42		.10		1.28	.35	.13		.50	.28						1.51	1.45	.02	.60	.55	.25	1.50	.51		.96	1.40	1.09	.44	.90	.44	14.68
Ochoco	Deschutes	.10	T.			.78	.20	T.		.02										T.	.01	.02	.21	.30		.10	T.		.26	.10		2.10
Ochoco Creek	....do	.23				.12	.07	.03											.06		.24	.07				.05						0.87
Ortley	Columbia	.06				.65	.64	.25		.05	.07							.11	.01	.18	.01	.11	.08	.41		.02		.02	.32	.17		3.16
Owyhee	Owyhee		.23			.25							.23	T.							.25	.19			T.	T.	.06	.03				1.24
Paisley	SE. drainage	.18	.32	.14	.15						.15	T.	.16					T.	.04	.04	.20											1.38
Parkdale	Columbia	.05				1.20	1.00	.51			.05							.03		.12		.15	.04	.45		.08	.02	.06	.23	.35		4.34
Pendleton	Umatilla	.13				.38	.03				.06	.07						.02	.09	.23	.01	.05		T.			.13	.10		.04		1.34
Peninsula	Deschutes	.09				.31	.17	.05		.08	.05									T.		.04	.02			T.			.10	T.		0.91
Persist	Rogue	.20				1.72	.62			.35		T.	.15					.56	.15	.13	.07					.17	.20	.32	.12	1.05	.29	6.10
Portland	Willamette	.12		.16	.23	.91	.01	.30		.09						.01	.58	.13		.17	.22	.17	.71	.07		.30	.15	.40	.52	.14	T.	5.39
Port Orford	Coast	1.28		.30	.77	1.53	.73	.32		.27		T.					.05	1.54	.24	.09	.50	.12	.24	.20		1.64	.25	.93	.14	1.03		12.17
Post	Deschutes	.05						.38			.19								.20			.15	.04					T.	.09	.05		1.15
Powell Buttes	....do	.30		.15																												0.45
Power House	Columbia	.54		T.		.03					.44			.04				.26	.08	.32		.03	.19			.22	.14	.07				2.36
Prairie City	John Day	.12	.01		T.	.28	.04	.02			.11	.26							.12		.24	.06	.05					.09		.01		1.41
Prineville	Deschutes	.20								T.	.10								.10		.10	.10		T.					.10		0.70
Prospect	Rogue	.20			.17	1.30	.76	.30		.10	.04		.10			T.		.15	.03	.10	.74	.09	.02			.21	.08	.32	.04	.78	.03	5.56

TABLE 2.—*Daily precipitation for November, 1913. District No. 12*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon—Continued.																															
Ramsey	Columbia	.13				.65	.20	.11	.02	.06	.03								.23	T.		.12	.04	.02			.02	.10	.31	.13		2.17
Range	John Day	.20	.10			.30					.30						T.	.10	.20	T.	.30	.10	.10	.10				T.	.20		.10	2.10
Ray Creek	Columbia	.27				.23	.05	T.		T.	.31			T.				.28	.02			.02					.06	.05	T.	T.		1.29
Redmond	Deschutes					.32	.05			.03	.02								.03	.03			.03									0.51
Reston	Umpqua	.69		.22	.08	1.80	.88	.15		.19	.15	.02	.03					.48		.45	.76	.45	.25	.03	.19		.86	.20	1.50	.06		9.44
Richland	Snake	.20										T.									T.		T.			T.						0.20
Riddle	Umpqua	.42				.53	.60	.04		.25	.01	.01						.29		.05	.72					.19	.20	.34	.04	.99	.02	4.70
Rio Hermoso	Deschutes	.12				.73	.52	.13	T.	.07	.20	.04								.04	.06	.12	.30	.10		.12	.06	.80	.05	.45	.06	3.97
Riverdale	do	.02				.15	.11	.12	T.	.15						.02	T.	.04	.08	.02	.06	.11	.02	.10				.08	T.			1.08
Riverside	Malheur	.25				.38							.20														.30	.30				1.43
Robbville	Deschutes		.40				.61	.06				.15											.15								1.37
Roseburg	Umpqua	.34		.30	.02	1.03	.22			.16							T.	.48		.20	.35	.12	.05			.09	.28	.26	.39	.49	.01	4.79
Salem	Willamette	.72			.24	.81	.14	.07		.19						T.	.29	.42		.14	.11	.14	.20	.24		.13	.17	.45	.55	.51	.02	5.54
Seneca	SE. drainage	.31						.66	.22			.18							.12			.18	.07			.12			.21			2.07
Silver Lake	do	.26				.25	.24	.06	.18				.27						.03	.02	.09											1.40
Siskiyou	Rogue	.15				.38												.15	.18	.02	.75	.05					.02	.40		.45		2.55
Sisters	Deschutes	.08				.76	.24	.14	.05	.02	.04										.09	.15	.21					.04	.25	.07	.05	2.19
Sparta	Snake					.45	.15									.02		T.		.05			.40					.03	T.			1.10
Stafford	Willamette	.58			.31	1.05	.55	.20		.11	.05					.05	.36	.52		.42	.26		.52	.56		.30	.06	.61	.27	.79	.01	7.58
Starkey	Grande Ronde	.17				.10	.07				.18							.04		.12	.14	.13	.02					.10	.03			1.10
Summit	Willamette	.60		T.	.26	1.10	.39	.07		.15							.53	1.04		.40	.63	.51	1.41	.44		.65	.38	.85	.18	1.23	.05	10.87
Susanville	John Day	.10	.11			.02	.08	.02			.07	.18							.10	.60	.06	.11					.20			.30	.01	1.96
Tablerock	Rogue	.07			.02	.58	.26	.01	T.	.02	.01	T.	.26	T.		T.		.30	.24	.06	.54	.07	T.	T.		T.	.01	.07	T.	.41		2.93
Talent	do	.10			.05	.46	.24				.09	.02	.02						.18		.55							.36		.16		2.23
Tamarack	John Day	.24	T.			.28	.01	.10			.19							T.	.16	T.	.16	.09					.07	.30	.36	.04		2.00
The Dalles	Columbia	.09				.50	.49	.12		.09	.07							.15		.07		.05	.05	.11			.09	.03	.25	.05		2.21
Tillamook	Coast	.21	.01		.85	1.28	.35	.15		.79	.06						1.38	.95		.59	.52	.44	1.37	1.29	.01	.81	.72	1.53	.63	1.32	.32	15.58
Toledo	do	.70			.55	1.60		.50		.50							.90	1.80		.50	.55	.60	1.15	.75		1.25	.35	1.20	.20	1.50	.40	15.00
Umatilla	Columbia	.20			.10	.20				.06	T.						.08	.07					.01			.16	.10	T.	.11			1.09
Union	Grande Ronde	.22				.11	.11				.20	.13							.13	.03	.05	.03	.02					.07	.05			1.15
Vale	Malheur		.08			.26	.02					.05								.05	.18	.08				.04	.21	.16		.03		1.16
Vida	Willamette	.39			.23	1.49	.96	.19		.42								.75		.50	.81	.80	.49	.04		.27	.25	.38	.82	1.01	.08	9.88
Vistillas	Pitt	.64				.04	.65				.10								.60		.37									.01		2.41
Waldo	Rogue				.30	1.70	.84			T.			.25					.90			1.23	.20	T.	.05		.45	.30	1.20	.10	1.83		9.35
Wallowa	Grande Ronde	.18	.10				.26				.32	.24								.14							T.	.16	.07			1.47
Wamic	Deschutes	.10				.35	.10	.09			T.							.05				T.							.35			1.04
Warmspring	do				.15	.20			.01	.04	.08	T.												T.	.01	.02			.20	.01		0.72
Wasco	Columbia	.28				.43	.19	.09		.06	.04						T.	.08	.17		T.		.11			T.	.05	.05	.21			1.76
Welches	do				.70	1.80		.42		.38							.56	.05		.90		.35	.98	1.00		.26		.55	1.05	.86	.42	10.22
Weston	Walla Walla					.58					.19		T.			T.	.04	T.	.42	T.	.27	.12				T.	T.	.40	T.	.10	T.	2.12
Whitaker	Deschutes	.14			.02	.24	.18	.01		T.	.26			T.					.19		.05		.02						T.			1.11
Williams	Rogue	.15			.09	1.95	.17				.05		.35	.05				.36			1.03	.05				.07	.03	.48	.20	.80	.10	5.93
Yonna	Int. drainage	.62				.62	.15				T.		T.					.06	.20	.20	T.					T.			T.	.24		2.09

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 12, Columbia Valley.*

Date.	Montana.				Afton, Wyo.		Idaho.																			
	Kalispell.		Missoula.				Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.		New Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Weston.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	43	35	48	38	57	31	52	42	38	30	60	32	47	42	55	31	48	24	64	43	58	32	.....	.....	59	33	66	32
2....	52	28	48	35	48	33	52	39	51	28	64	35	54	37	56	33	44	32	50	33	52	34	.....	.....	50	35	49	38
3....	42	22	45	28	50	27	53	33	50	20	57	34	56	33	54	31	53	18	50	32	49	19	.....	.....	55	29	56	34
4....	35	22	40	28	50	20	52	41	48	26	52	36	56	37	46	21	44	21	50	35	40	18	.....	.....	43	22	53	26
5....	47	32	43	27	50	26	50	44	42	34	56	41	51	39	49	32	45	30	55	35	52	26	.....	.....	51	31	58	30
6....	46	36	46	32	43	34	53	46	48	33	59	46	56	37	46	32	48	34	51	41	55	36	.....	.....	53	34	50	40
7....	46	27	48	27	47	29	60	44	48	25	60	55	50	32	48	30	53	32	52	37	54	22	.....	.....	46	29	49	34
8....	53	34	52	29	60	22	63	38	52	35	64	37	60	38	45	23	58	17	57	34	55	26	.....	.....	51	25	51	25
9....	51	30	53	28	60	22	67	39	50	29	66	42	51	39	47	25	58	22	63	29	54	25	.....	.....	60	30	59	26
10....	41	35	47	35	58	21	60	50	48	34	64	47	46	43	54	25	56	27	60	41	47	28	.....	.....	55	28	57	27
11....	43	30	50	33	54	31	52	39	51	35	57	44	54	39	49	31	46	35	58	40	48	32	.....	.....	42	32	55	38
12....	44	27	44	26	49	32	51	37	47	29	55	46	53	32	51	30	62	25	51	33	47	27	.....	.....	42	32	50	35
13....	42	21	40	23	43	19	41	29	42	23	48	33	41	29	47	32	47	16	45	28	43	17	.....	.....	48	23	38	28
14....	37	21	39	20	39	29	46	26	35	22	50	31	41	34	46	18	46	25	40	33	44	15	.....	.....	37	26	48	33
15....	39	26	45	19	42	18	46	29	48	31	53	24	47	31	39	17	42	16	48	30	38	15	.....	.....	49	28	48	24
16....	58	39	49	27	44	13	58	31	52	18	58	32	50	41	48	20	48	28	51	34	50	23	.....	.....	50	24	50	23
17....	43	39	49	38	40	13	56	45	48	38	60	37	52	43	44	19	54	32	53	36	47	27	.....	.....	46	23	49	23
18....	43	30	43	32	42	30	52	40	45	32	52	38	50	35	46	25	44	34	49	41	50	32	.....	.....	43	22	49	32
19....	39	28	42	19	43	31	52	36	39	32	58	30	40	32	40	29	40	29	55	31	53	25	.....	.....	49	34	54	39
20....	36	26	37	29	40	29	41	33	39	26	52	34	46	34	36	21	36	30	46	26	49	33	.....	.....	49	31	45	32
21....	30	15	32	21	31	14	33	30	38	23	44	39	42	31	31	11	32	18	33	26	36	20	.....	.....	32	16	34	24
22....	39	21	40	32	36	17	44	27	40	24	50	27	48	34	31	6	34	9	39	24	38	16	.....	.....	30	16	39	14
23....	37	28	42	32	41	7	49	29	38	28	50	26	48	41	32	12	44	27	46	24	49	27	.....	.....	40	12	40	13
24....	46	30	42	27	52	10	55	26	42	33	53	30	50	39	37	20	30	0	49	21	47	13	.....	.....	42	12	47	18
25....	36	28	45	25	40	29	52	34	38	29	60	37	52	37	41	25	44	5	47	34	37	16	.....	.....	40	28	57	29
26....	46	29	44	24	44	27	55	39	47	32	62	38	54	40	43	13	40	32	50	35	46	22	.....	.....	41	26	49	29
27....	42	29	45	25	42	26	53	34	44	30	56	44	55	40	39	18	43	30	47	34	44	24	.....	.....	40	30	48	31
28....	40	25	41	23	36	21	45	33	40	32	50	36	51	36	42	20	37	14	38	27	40	19	.....	.....	32	26	42	21
29....	36	25	36	26	36	13	47	33	40	30	42	35	55	43	39	11	36	30	42	29	40	22	.....	.....	36	17	36	20
30....	40	31	39	29	30	13	42	30	41	34	40	27	52	35	37	12	35	18	34	24	40	23	.....	.....	42	18	35	21
Mns..	42.4	28.3	43.8	27.9	44.9	22.9	51.1	35.9	44.3	29.2	55.1	36.1	50.3	36.8	43.9	22.4	44.9	23.7	49.1	32.3	46.7	23.8	.....	.....	45.1	25.7	48.7	28.0

Date.	Washington.																									
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	55	38	54	43	49	33	60	32	54	39	52	46	52	42	48	38	49	32	55	43	47	40	45	35	53	44	50	42
2....	56	33	56	29	51	29	60	29	54	37	58	45	53	31	50	28	46	35	55	40	50	42	49	34	52	37	54	40
3....	54	39	50	29	49	19	65	48	50	40	56	49	54	26	47	28	54	34	62	44	47	43	52	31	55	32	55	48
4....	52	41	52	40	46	25	62	37	54	39	51	45	57	30	52	28	49	38	53	46	59	35	50	34	54	46	49	46
5....	56	43	50	42	53	36	48	41	44	33	55	45	52	40	48	41	51	36	52	45	50	39	49	37	53	45	48	43
6....	52	43	54	42	54	33	51	40	45	34	53	48	54	37	52	40	53	37	52	44	51	42	49	35	52	41	51	43
7....	50	40	45	32	48	21	56	35	49	36	57	48	48	36	45	26	45	37	51	42	51	41	43	28	50	38	48	42
8....	50	43	53	36	49	34	65	43	45	37	62	53	56	36	54	37	54	44	59	44	55	34	52	39	55	39	58	48
9....	52	44	53	44	43	29	62	40	53	39	54	47	47	34	46	34	52	37	55	48	44	32	47	39	56	47	54	45
10....	54	39	52	34	47	38	53	42	53	32	52	43	49	33	45	38	49	32	50	43	45	37	47	43	50	44	48	44
11....	50	32	46	27	48	31	60	45	51	27	52	41	54	31	51	30	49	31	49	40	50	34	43	29	48	38	47	42
12....	44	29	46	28	43	28	68	49	39	33	46	39	49	25	41	26	46	36	45	40	44	31	39	28	45	34	47	42
13....	46	34	44	24	40	24	55	30	39	31	45	36	43	32	39	25	44	28	46	39	38	33	38	28	45	39	45	40
14....	47	30	45	24	33	17	68	40	41	35	46	38	41	36	38	32	44	28	45	35	40	35	36	31	44	35	46	39
15....	51	34	48	36	36	30	58	30	44	31	51	42	44	34	40	32	59	38	52	38	48	31	50	33	56	36	51	45
16....	53	41	49	42	52	33	43	32	44	37	51	41	57	31	53	39	49	35	53	41	55	38	56	43	57	40	51	41
17....	50	40	45	28	44	37	48	37	49	32	52	41	55	38	54	42	43	37	46	40	60	40	54	43	44	40	45	36
18....	46	38	44	35	44	32	58	36	45	32	50	43	50	29	49	36	45	38	49	38	50	35	46	32	47	35	47	42
19....	48	36	49	36	37	32	60	38	46	29	49	43	50	29	39	28	47	32	46	37	47	34	40	34	46	37	48	41
20....	40	29	44	33	37	28	58	34	42	27	45	38	44	27	41	22	41	31	45	36	46	29	40	28	46	32	44	36
21....	40	30	42	30	45	30	51	32	42	29	49	39	46	24	38	26	43	30	42	37	44	32	36	28	44	35	45	38
22....	50	40	48	34	41	22	49	36	39	29	50	46	53	28	50	23	51	33	50	40	55	35	44	30	51	39	50	42
23....	54	41	46	38	40	24	46	35	40	33	52	47	51	36	52	33	48	33	57	42	60	40	49	38	58	42	52	42
24....	52	47	52	44	41	32	44	33	46	34	54	48	52	40	50	41	49	44	57	49	63	41	52	40	58	49	51	46
25....	50	43	52	44	37	31	45	35	44	34	50	43	52	32	53	36	47	40	52	45	54	42	50	37	52	45	50	42
26....	52	43	54	45	44	32	40	31	53	39	53	44	52	36	52	37	48	38	57	42	55	38	51	41	59	43	52	45
27....	48	40	54	40	48	32	42	33	41	32	48	43	50	34	47	38	45	34	46	40	54	35	49	39	47	40	50	40
28....	53	40	44	40	40	31	44	35	44	32	49	43	42	24	42	30	45	32	47	41	45	31	43	34	50	39	51	38
29....	49	43	50	40	42	32	46	36	44	31	49	45	50	31	50	37	47	41	51	42	53	38	49	38	52	41	48	44
30....	50	41	45	40	42	30	45	38	45	32	48	46	42	26	44	30	49	40	48	41	53	36	44	33	48	40	49	45
Mns..	50.1	38.5	49.0	36.0	44.1	29.5	53.7	36.7	46.0	33.5	51.3	43.8	50.0	32.3	47.0	32.7	48.0	35.4	50.9	41.4	50.4	36.4	46.4	34.7	50.9	39.7	49.5	42.2

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1913. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker.		Eugene.		Hermiston.		Marshfield.		Portland.		Port Orford.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	45	41	57	49	45	35	59	49	50	42	62	51	55	46	64	56	64	42	55	52	55	45	50	35
2	51	39	64	41	43	30	61	45	53	38	68	39	60	39	56	45	54	33	61	45	62	44	54	35
3	42	36	69	42	51	24	61	29	51	33	59	42	58	47	56	44	59	22	62	43	59	30	56	23
4	58	37	60	47	51	36	61	41	62	32	61	39	57	49	57	45	62	35	58	41	67	35	50	24
5	56	43	54	44	46	41	59	47	55	42	60	46	57	47	54	48	52	41	58	47	54	45	58	34
6	54	44	57	44	49	40	59	47	57	44	58	49	55	48	54	50	53	38	55	50	60	46	55	41
7	51	39	61	39	51	39	67	46	53	43	70	52	56	48	62	52	67	41	61	48	53	45	56	40
8	47	35	74	47	55	38	61	45	51	29	64	45	56	50	64	43	60	36	56	51	50	41	57	28
9	51	37	69	41	56	39	57	45	48	30	63	52	56	49	56	51	52	33	58	49	48	35	58	28
10	51	42	57	45	47	41	59	42	47	39	59	47	49	44	52	45	48	39	54	43	52	41	55	44
11	51	41	46	33	46	31	50	38	53	41	55	40	50	42	52	41	54	32	46	42	56	42	59	39
12	44	37	50	33	43	25	47	39	45	30	58	36	44	36	63	39	----	----	46	43	47	32	55	28
13	38	36	46	31	31	22	43	37	41	35	50	33	50	36	50	38	50	22	44	40	46	40	54	22
14	41	34	43	28	30	25	42	37	45	37	54	29	46	34	52	32	45	30	42	40	47	39	49	18
15	51	34	47	25	38	22	55	33	46	28	53	30	47	36	51	35	59	22	53	40	50	36	45	25
16	62	45	42	25	46	34	62	46	55	37	61	40	54	40	54	45	60	35	53	40	60	36	43	17
17	58	42	53	40	50	39	59	43	52	42	57	47	53	41	59	48	57	41	50	36	58	40	51	32
18	51	39	44	38	43	31	51	33	54	33	48	35	50	37	57	45	52	31	45	36	49	32	53	40
19	48	37	44	33	44	27	49	35	48	27	48	34	46	39	48	36	43	20	46	36	45	31	47	27
20	47	36	41	33	38	29	50	37	50	32	48	36	43	37	48	41	44	24	45	37	47	42	47	35
21	44	36	46	30	36	26	52	36	49	29	53	35	47	38	50	40	42	20	47	38	50	33	45	27
22	52	41	53	32	36	27	58	41	59	35	52	43	50	47	56	48	48	29	55	43	65	36	47	24
23	60	48	59	37	43	28	71	47	69	41	60	50	59	49	55	49	56	37	62	48	52	44	48	27
24	60	55	56	43	43	23	62	44	62	52	61	42	56	48	54	50	52	34	53	43	49	42	49	17
25	60	49	57	44	44	32	60	45	65	52	54	45	54	47	53	46	53	40	55	45	51	38	45	26
26	60	46	55	42	45	38	62	45	66	42	57	46	59	45	54	43	56	35	58	42	52	36	50	35
27	58	41	52	30	45	31	56	45	65	40	53	39	48	43	54	43	50	27	48	36	55	36	52	42
28	53	40	48	32	42	26	56	39	54	31	54	43	49	41	51	44	38	23	53	40	48	30	51	28
29	55	42	45	34	41	31	55	42	60	42	54	45	49	44	52	45	46	35	47	40	55	35	46	37
30	50	38	44	33	38	25	50	40	53	36	52	34	49	42	53	35	47	25	47	37	52	36	46	29
Mns.	51.6	40.3	53.1	37.2	43.9	31.2	56.5	41.3	53.9	37.1	56.9	41.5	52.1	43.0	54.7	44.1	52.5[a]	31.8[a]	52.4	42.4	53.1	37.9	51.0	30.2

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

WEATHER, FORECASTS AND WARNINGS.

By H. C. FRANKENFIELD, Professor of Meteorology.

The month opened with marked high pressure central over the Ohio Valley, fair weather and moderately low temperatures, except in the Northwest, where pressure was falling rapidly, with a low over Saskatchewan, and with higher temperatures and fair weather over the Northwest generally. Rain was falling, however, in the Pacific States. On the morning of the 2d the high area had diminished somewhat, but low temperatures continued in the South, with heavy to killing frosts in South Carolina and Georgia. Over the central and western portions of the country temperatures were considerably higher with the principal low, a moderate one, over Manitoba. Farther northwestward pressure was rising rapidly, and rains and snows had been quite general west of the Rocky Mountains. The low moved eastward over the extreme North without unusual incident, and passed off the Newfoundland coast on the 6th. It was followed by another strong high area and lower temperatures that reached the Atlantic States on the 6th.

During the last days of October and the first two days of November pressure was abnormally low over the Aleutian Islands, and on the evening of November 3 there were pronounced indications of the near approach of a storm on the north Pacific coast, and storm warnings were at once ordered for that district. On the following morning there was a marked disturbance over Alberta, the low pressure still extending westward to the coast, and the storm warnings were changed to small-craft warnings.

As stated before, pressure was high to the eastward, and beginning on the 3d snows occurred in the Rocky Mountain region and rains to the southeastward, reaching the Texas coast by the morning of the 5th, when the centers of low pressure were still over the Canadian Northwest, with a general pressure fall eastward to the Mississippi River. As pressure had continued to fall on the Pacific coast during the 4th, storm warnings were again ordered at 6.30 p. m. of that date, and continued on the following evening. Rain in fair quantity had continued west of the Rocky Mountains, but there was none to the eastward until the 6th, when there was some rain in Montana and the Dakotas. On the morning of the 7th the disturbance was central in a well-defined low over southeastern Minnesota (St. Paul, 29.44 inches), and there was a moderate secondary center over Oklahoma (29.84 inches). By this time strong high pressure prevailed over the far Northwest, a very rapid recovery having set in during the night of the 6th, but without any decided fall in temperature. Storm warnings were ordered on the Great Lakes on the morning of the 7th, and on the following morning the northern storm center was over eastern Lake Superior, and high winds had occurred generally over the upper Lakes. Storm warnings on the Lakes were then ordered continued. The southern disturbance had moved to Georgia and was still of moderate character, but the combined effect of the two depressions gave general rains east of the Mississippi River, except in New England. After the 8th the northern disturbance was not of consequence, but the southern one began to take upon itself new energy, and after leaving the South Carolina coast it turned sharply to the northward, leaving in its wake over the Carolinas a torrential downpour of rain which necessitated flood warnings for the rivers of South Carolina. Before the storm center had passed to the South Carolina coast storm warnings were ordered on the northeast Gulf coast and on the Atlantic coast from Jacksonville to Charleston.

On the evening of the 8th the warnings were extended northward to Fort Monroe, Va., and during the night moderately high winds occurred over the territory where warnings had been ordered on the previous afternoon. On the morning of the 9th the storm was central over northern Virginia (Mount Weather, Va., 29.10 inches), and rains and snows had fallen generally in the Lake region, the Ohio Valley, and the Atlantic States. The storm warnings were then extended along the entire Atlantic coast from Virginia northward and continued on the lower Lakes and Lake Huron. As the storm center moved northward heavy snows set in over eastern Ohio, West Virginia, and western Pennsylvania, and by the evening of the 9th more than a foot of wet snow had fallen, completely demoralizing railroad traffic and telegraph service. At this time the storm center was near Erie, Pa. (28.61 inches), and snows, rains, and gales were in progress throughout the territory from the Lake region and the Ohio Valley eastward. Storm warnings were then again ordered for Lake Superior and eastern Lake Michigan. On the morning of the 10th the storm was central a short distance north of eastern Lake Erie (Buffalo, 28.96 inches), with continued gales, snows, and rains in the Lake region, the upper Ohio Valley, the middle Atlantic States, and New England. In the South and central West pressure was rising, with somewhat lower temperatures, and heavy to killing frosts occurred in the southern States. Storm warnings were ordered to be continued on the lower Lakes and on the Atlantic coast from Virginia to Maine. During the 10th the storm lost much of its energy, and by the morning of the 11th the remnants were over the St. Lawrence Valley, the rains and snows had practically ceased, and the winds had subsided. Temperatures had fallen considerably over the eastern half of the country and there were more heavy frosts and freezing temperatures in the South. The highest wind velocity reported during the storm was 76 miles an hour from the southwest at Buffalo, N. Y., on the 10th. Middle Island in northern Lake Huron reported 56 miles an hour from the north during the afternoon of the 9th. Unfortunately a great many lives were lost during this storm, and the losses to the marine interests, mainly on Lakes Huron and Erie, amounted to several millions of dollars.

The storm was the most disastrous that has occurred in many years, although higher and more adverse winds have not been infrequent in the past, and it is practically certain that the greater portion of these disasters was due to the blinding snow carried with the northwest gales. All navigation is practically helpless during heavy snows, and on the narrow lakes a vessel that loses

its way is in imminent danger of destruction at any time. On the morning of the 12th pressure was high over the Atlantic and Gulf States, the Ohio Valley, and the lower Lake region, and a well-defined low was over northwestern Lake Superior, having moved in from the north Pacific coast since the 8th. It had thus far caused no precipitation east of the Rocky Mountains, but there had been rains to the westward. Temperatures, however, had risen decidedly over the central portion of the country and were falling in the Plateau region, with rising pressure that extended eastward into the Plains States. Small craft warnings were ordered for Lakes Huron, Erie, and Ontario at 10 a. m., and some moderately strong winds followed, and on the morning of the 13th a trough of moderately low pressure extended from western Texas to the Great Lakes with a high area on either side, and the unsettled, rainy weather incident to this type prevailed over the great central valleys and the lower Lake region, with abnormally high temperatures over the rain area. The rains later extended through the Atlantic States, and a very moderate depression moved over the Ohio Valley and the middle Atlantic States, passing off the coast during the night of the 16th, by which time more seasonable temperatures prevailed over the eastern portion of the country. On the morning of the 10th there was a moderate depression over Nevada. It remained nearly stationary for about 36 hours, causing some local rains in California, Nevada, Utah, and Arizona, and then moved eastward, merging apparently into the moderate depression noted above.

On the morning of the 15th a decided low was central north of Alberta, it being apparently the advance of an extensive general depression to the westward. There were the usual rains in the north Pacific States, and storm warnings ordered at 7 a. m. on the Washington and Oregon coasts were continued on the following morning and extended to the northern California coast. On the morning of the 16th storm warnings were ordered for central and western Lake Superior and northwestern Lake Michigan, and moderately strong winds followed. After the 16th the high-pressure area persisted over the South Atlantic States until the end of the month, with low pressure elsewhere until the 22d, especially over the Northwest, and with scattered centers of disturbance. One of these centers appeared on the central California coast during the night of the 17th, attended by general and heavy rains, and storm warnings were ordered for the southern coast. Unsettled weather also prevailed to the eastward and a disturbance from the Northwest moved rapidly eastward from the 18th to the 20th, reaching the lower St. Lawrence Valley on the latter date. It was attended by rains from the upper Mississippi Valley eastward with some moderately strong winds on the 19th over the Great Lakes, for which small-craft warnings had been previously ordered. During these days the persistent high area over the South Atlantic States caused a continuance of abnormally high temperatures over all central and northern districts east of the Rocky Mountains. West of the mountains temperatures were more moderate, and in some localities rather low for the season.

During the night of the 18th-19th there was another sharp fall in pressure over the Pacific Northwest, and on the morning of the 19th storm warnings were again ordered along the northern coast. At the same time there was another depression over extreme southern California, necessitating storm warnings on the 18th, and general rains and snows were in progress west of the Rocky Mountains. During the 19th the northern disturbance moved eastward to Alberta with increased development, while the southern one moved to northern Arizona. Precipitation had been quite general, although mostly light, west of the Rocky Mountains, and there was no high pressure, except in the South Atlantic and east Gulf States. By the morning of the 20th there was a decided pressure fall over the Rocky Mountain region and the western portions of the Plains States, with three distinct centers of disturbance, one over Saskatchewan, one over western South Dakota, and one over northern New Mexico, and general rains and snows continued west of the mountains. By the morning of the 21st there was but a single center of depression, of pronounced character, central over Minnesota. The rains had extended through the Plains States into the Missouri and upper Mississippi Valleys and the upper Lake region, and had ceased to the westward, except over a few scattered localities. There were, however, indications of the approach of another distrubance toward the north Pacific coast. At 10 p. m. of the 20th, northeast and southeast storm warnings were ordered on the upper Lakes, and on the following morning southwest warnings were ordered for the lower Lakes. High winds occurred on the upper Lakes and brisk winds on the lower Lakes. By the morning of the 22d there was only a trough of moderately low pressure extending from the lower Mississippi Valley to Lake Superior, with a strong high area on either side, and precipitation had been light and scattered. Temperatures had been abnormally high east of the Rocky Mountains, and still continued so, but had fallen to the westward and were moderately low. Pressure had fallen sharply in north Pacific States with rains and increasing winds, and storm warnings were ordered early on the morning of the 22d.

During the 22d the northern section of the middle-west depression moved eastward, and by the evening of the 23d it had passed beyond the Canadian Maritime Provinces with greatly increased intensity, accompanied by rains and some moderately high winds of brief duration from the Ohio Valley and upper Lake region northeastward. The southeastern high area fell away slightly, and the western one developed considerable strength over the interior with clear weather and a temperature fall to almost normal conditions. At the same time the Northwest low of the 22d had moved very rapidly, but in moderate form, to the northward of Lake Superior, and another of considerable energy had reached the north Pacific coast. Incidentally it should be mentioned that the interior high area of the 22d and 23d, with the moderately low pressure to the southward, had caused general rains over interior Texas. These rains were followed by floods in various rivers, particularly the Colorado, for which ample and timely warnings were issued. The low area north of Lake Superior moved eastward about as rapidly as its immediate predecessor and was attended by very similar conditions. Preceding this disturbance small craft warnings were ordered for the Lakes. As the storm conditions persisted, the storm warnings of the 22d on the north Pacific coast were continued from day to day until the 30th. By the evening of the 24th the north Pacific storm of the 22d had reached southern Saskatchewan with diminishing intensity and another was close to the north Pacific coast. Over the eastern half of the country pressure remained high with generally clear weather. Small craft warnings and cautionary advices were issued for Lake Superior and northern Lake Michigan on the evening of the 24th, and on the following

morning northwest and southwest storm warnings were ordered for the upper Lakes and small craft warnings for the lower Lakes.

The storm center, of moderate intensity only, was then over northern Lake Superior, with a loop extending southwestward into eastern Colorado, and rains were falling throughout the Southwest. This disturbance continued eastward, attended by local rains, and unsettled conditions continued to the westward attended by quite general rains and by some snows over the extreme northern districts. Temperatures remained high, as a rule, except on the 27th, when there was a sharp fall to slightly below normal conditions over New England and the Middle Atlantic States. With abnormally high pressure persisting over the Northeast there was no opportunity for immediate change, and unsettled rainy weather with high temperatures continued at the close of the month over practically the entire country east of the Rocky Mountains. West of the mountains pressure was high on the 28th with moderately low temperatures, but by night another severe storm had reached the north Pacific coast. As has been remarked before, storm warnings were displayed on the north Pacific coast continuously from the 22d to the 30th, inclusive, with an occasional display on the California coast. The north Pacific storm of the 28th moved eastward to the Canadian Northwest, practically without precipitation, where it still remained at the close of the month, but in a very moderate form and apparently at the end of its existence. However, an offshoot from this storm moved southeastward over the Plateau region, and at the end of the month had reached northern Arizona, almost dry, and with a strong high area following. On the 28th also a slight pressure fall developed over the extreme Southwest. Rains were falling to the eastward and southeastward, and the disturbance developed slowly to the eastward and northeastward sufficiently to prolong the general rain condition prevailing over the central and eastern portions of the country, but without effective energy, and at the close of the month it was slowly dissipating over northern Missouri.

NORTHERN HEMISPHERE PRESSURE DISTRIBUTION.

Over Alaska low pressure prevailed generally throughout the month except on a few days, and there were a number of severe storms with very low pressure, Sitka reporting 28.80 inches on the 15th and 28.72 inches on the 27th. The only high pressure of consequence that occurred during the month in Alaska was on the 7th and 16th over the western portion.

Over the United States there was the usual alternation of high and low areas, the former predominating to some extent over the interior districts, and almost entirely in the Atlantic States. The only severe storm of the month was the storm that moved northward from the South Carolina coast during the night of the 8th, reaching Lake Erie on the following night with a barometer reading of 28.61 inches at Erie, Pa.

High pressure also prevailed generally throughout the month over the north Atlantic Ocean, except from the 9th to the 12th, inclusive, over the eastern ocean, where there was a decided fall in pressure, mainly on the 9th. Over Iceland pressure was low during almost the entire month, with very low barometer readings on the 15th and 17th, when they averaged more than 1 inch below the normal. Over the British Islands and western Europe, except in Spain, low pressure prevailed during the first half of the month and uniformly high pressure during the second half. In extreme southwestern Europe pressure was high, except from the 9th to the 12th. Over eastern Europe pressure was generally low, especially after the middle of the month, and there were no periods of abnormally high pressure, the crest of the 26th over northwestern Russia having been about the most extensive.

Over Siberia there were rapidly alternating periods of highs and lows during the first two decades of the month, but during the third decade high pressure ruled almost uniformly with a strong principal crest on the 26th. The same conditions applied to Japan and China, with a principal crest over Nemuro on the last day of the month. Over the Pacific Ocean pressure appears to have been high the greater portion of the time. Over the southern Pacific, as indicated by reports from Honolulu, there were fairly strong crests from the 3d to the 6th, inclusive, and on the 24th; over the north Pacific Ocean, as indicated by reports from Dutch Harbor, in the Aleutian Islands, there were two crests of abnormally high pressure, one on the 7th and the other on the 16th, corresponding to similar crests of less intensity over western Alaska.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since Jan. 1.	Average departures since Jan. 1.
New England	12	43.5	+4.2	+22.7	+2.1
Middle Atlantic	15	47.1	+3.2	+21.5	+2.0
South Atlantic	10	54.8	+0.7	+15.4	+1.4
Florida Peninsula [1]	9	66.9	+0.6	+ 7.8	+0.7
East Gulf	11	58.8	+3.2	+ 6.9	+0.6
West Gulf	11	63.1	+6.7	0.0	0.0
Ohio Valley and Tennessee	14	49.4	+4.6	+16.7	+1.5
Lower Lakes	11	44.1	+5.0	+13.6	+1.2
Upper Lakes	13	40.4	+6.1	+10.0	+0.9
North Dakota [1]	9	34.0	+8.4	+ 4.7	+0.4
Upper Mississippi Valley	13	46.6	+8.9	+15.6	+1.4
Missouri Valley	12	46.6	+9.1	+ 8.7	+0.8
Northern slope	9	37.4	+5.5	− 5.3	−0.5
Middle slope	6	48.4	+6.6	+ 6.2	+0.6
Southern slope [1]	8	55.9	+5.5	− 3.2	−0.3
Southern Plateau [1]	9	52.8	+2.4	−19.3	−1.8
Middle Plateau [1]	10	39.4	+2.0	− 6.8	−0.6
Northern Plateau [1]	11	39.9	+3.1	−11.4	−1.0
North Pacific	7	47.6	+0.8	− 1.2	−0.1
Middle Pacific	7	52.4	−0.7	+ 3.5	+0.3
South Pacific	4	58.6	+1.6	+14.4	+1.3

[1] Regular Weather Bureau and selected cooperative stations.

Average precipitation and departure from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
New England	11	1.77	50	−1.80	−4.60
Middle Atlantic	15	2.06	75	−0.70	−2.40
South Atlantic	11	1.36	46	−1.60	−6.30
Florida Peninsula [1]	9	1.09	50	−1.10	−8.30
East Gulf	11	2.10	60	−1.40	−0.50
West Gulf	10	3.30	103	+0.10	+2.60
Ohio Valley and Tennessee	14	3.71	106	+0.20	+2.30
Lower Lakes	10	2.73	90	−0.30	+2.00
Upper Lakes	14	2.12	88	−0.30	−1.30
North Dakota [1]	9	0.27	40	−0.40	−3.60
Upper Mississippi Valley	14	2.02	100	0.00	−2.50
Missouri Valley	12	1.28	100	0.00	−4.40
Northern slope	9	0.58	74	−0.20	+0.40
Middle slope	6	1.66	173	+0.70	−2.00
Southern slope [1]	8	3.50	184	+1.60	−1.10
Southern Plateau [1]	9	1.19	202	+0.60	−1.00
Middle Plateau [1]	11	1.51	186	+0.70	−0.40
Northern Plateau [1]	11	2.12	105	+0.10	−0.20
North Pacific	7	7.53	103	+0.20	−4.00
Middle Pacific	6	5.35	170	+2.20	−7.30
South Pacific	4	2.76	219	+1.50	−1.40

[1] Regular Weather Bureau and selected cooperative stations.

Average relative humidity and departure from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	73	− 5	Missouri Valley	72	+ 1
Middle Atlantic	73	− 2	Northern slope	70	+ 3
South Atlantic	73	− 5	Middle slope	70	+ 8
Florida Peninsula	78	− 2	Southern slope	74	+12
East Gulf	74	− 2	Southern Plateau	63	+20
West Gulf	79	+ 5	Middle Plateau	70	+12
Ohio Valley and Tennessee	74	+ 1	Northern Plateau	72	− 2
Lower Lakes	77	0	North Pacific	88	+ 4
Upper Lakes	79	− 1	Middle Pacific	83	+ 8
North Dakota	79	0	South Pacific	75	+ 8
Upper Mississippi Valley	75	+ 1			

Average cloudiness and departure from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	6.0	+0.2	Missouri Valley	5.9	+1.1
Middle Atlantic	5.6	+0.3	Northern slope	5.6	+0.8
South Atlantic	3.6	−0.9	Middle slope	5.3	+1.4
Florida Peninsula	5.6	+1.1	Southern slope	5.6	+0.4
East Gulf	4.0	−0.6	Southern Plateau	4.1	+1.3
West Gulf	5.7	+1.1	Middle Plateau	5.3	+1.4
Ohio Valley and Tennessee	6.2	+0.5	Northern Plateau	7.6	+1.8
Lower Lakes	7.1	−0.2	North Pacific	8.1	+0.6
Upper Lakes	6.3	−0.8	Middle Pacific	6.3	+1.8
North Dakota	5.0	−0.4	South Pacific	4.6	+1.3
Upper Mississippi Valley	6.2	+0.9			

Maximum wind velocity.

Station.	Date.	Velocity.	Direction.	Station.	Date.	Velocity.	Direction.
Alpena, Mich.	9	50	nw.	NorthHead, Wash.—Continued.			
Buffalo, N. Y.	1	58	w.	Do.	8	60	se.
Do.	3	60	sw.	Do.	15	66	se.
Do.	10	80	sw.	Do.	16	70	se.
Do.	17	50	sw.	Do.	19	62	s.
Do.	23	56	sw.	Do.	21	62	se.
Do.	24	50	nw.	Do.	22	68	s.
Do.	25	58	sw.	Do.	23	60	se.
Burlington, Vt.	9	50	s.	Do.	24	72	se.
Do.	10	58	s.	Do.	25	76	se.
Cheyenne, Wyo.	6	50	nw.	Do.	26	58	se.
Cleveland, Ohio.	9	62	nw.	Do.	27	52	s.
Do.	10	56	w.	Do.	28	82	se.
Detroit, Mich.	9	52	nw.	Do.	29	84	s.
Duluth, Minn.	7	62	nw.	Point Reyes Light, Cal.	19	54	nw.
El Paso, Tex.	20	50	nw.	Do.	20	53	nw.
Grand Haven, Mich.	9	54	nw.	Do.	26	51	s.
Do.	10	50	nw.	Do.	29	70	nw.
Green Bay, Wis.	9	54	n.	Do.	30	57	nw.
Helena, Mont.	6	53	sw.	Port Huron, Mich.	9	58	n.
Kansas City, Mo.	7	50	nw.	Providence, R. I.	9	56	se.
Ludington, Mich.	9	50	nw.	St. Paul, Minn.	7	52	n.
Minneapolis, Minn.	7	50	nw.	Sandusky, Ohio.	10	53	nw.
Mt. Tamalpais, Cal.	19	58	nw.	Sioux City, Iowa.	7	54	nw.
Do.	20	50	nw.	Tatoosh Island, Wash.	4	52	s.
Do.	26	52	sw.	Do.	5	56	e.
Do.	27	52	nw.	Do.	7	52	e.
Do.	29	62	n.	Do.	8	52	s.
Do.	30	66	n.	Do.	9	52	s.
Mount Weather, Va.	1	50	nw.	Do.	15	58	s.
Do.	9	54	w.	Do.	19	62	s.
Do.	24	52	nw.	Do.	23	64	s.
Do.	25	59	nw.	Do.	27	50	sw.
New York, N. Y.	6	64	se.	Do.	28	52	e.
Do.	10	52	s.	Do.	29	62	w.
Do.	23	52	nw.	Toledo, Ohio.	9	52	nw.
Do.	24	53	nw.				
North Head, Wash.	3	56	se.				
Do.	4	68	se.				
Do.	5	50	w.				

RIVERS AND FLOODS, NOVEMBER, 1913.

By ALFRED J. HENRY, Professor in Charge, River and Flood Division.

Owing to heavy snows of from 1 to 3 feet in the mountains, light, warm rains on the 13th and 14th caused very rapid rises in the rivers of western Pennsylvania and West Virginia. The Monongahela River at Fairmont, W. Va., crested at 29.5 feet, 4.5 feet above flood stage, on the 16th; at Greensboro, Pa., 31.2 feet, 11.2 feet above flood stage, on the 16th; and at Lock No. 4, Pa., 36.6 feet, 8.6 feet above flood stage, on the 17th. In the other rivers the crest stages were somewhat below or slightly above the flood stage.

In the Ohio River flood stages were reached only at Pittsburgh, Pa., Parkersburg, W. Va., and Point Pleasant, Ohio, where crest stages were 22.2 feet on the 17th, flood stage 22 feet; 36.5 feet on the 17th, flood stage 36 feet; and 42.7 feet on the 18th, flood stage 40 feet, respectively.

Heavy rains on the 8th and 9th caused very moderate floods in the Cape Fear, Roanoke, and Staunton Rivers in North Carolina, and in the Pedee, Wateree, and Santee Rivers of South Carolina.

Heavy rains during the last week of the month caused sharp rises in the rivers of Texas. The following crest stages above the flood plain were reached: At Columbus on the Colorado River, 34 feet, 10 feet above flood stage, on the 30th; at Dallas on the Trinity River, 30.2 feet, 5.2 feet above flood stage, on the 25th; and at Victoria on the Guadalupe River, 22.9 feet, 4.9 feet above flood stage, on the 28th. Further account of the Texas floods will appear in a later issue.

Losses due to November, 1913, floods.

State.	River system.	Item 1, general loss, bridges, etc.	Item 2.		Item 3, suspension of business.
			Crops.	Live stock.	
Pennsylvania	Monongahela	$30,000	$3,000	.....	.....
South Carolina	Wateree, Santee	900	.....	.....	.....

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Junior Professor in Charge of Library.

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Aachen. Meteorologisches Observatorium.
Deutsches meteorologisches Jahrbuch für 1911. Aachen. Jahrgang 17. Karlsruhe. 1913. 30 p. f°.

Austria-Hungary. Hydrographisches Amt der k. k. Kriegsmarine in Pola.
Ergebnisse der meteorologischen Beobachtungen in Pola für das Lustrum 1906–1910. Pola. 1913. 32 p. f°. (Veröffentlichungen. Nr. 33.)
Jahrbuch der meteorologischen, erdmagnetischen und seismischen Beobachtungen. Neue Folge. 17. Band. 1912. Pola. 1913. xxii, 178 p. f°. (Veröffentlichungen. Nr. 34.)

Austria-Hungary. K. k. Hydrographisches Zentralbureau.
Die Niederschläge in den österreichischen Flussgebieten. Lieferung I. Das Donau- und das Marchgebiet. Wien. 1913. vii, 220 p. f°. (Beiträge zur Hydrographie Oesterreichs. 10. Heft. 1. Lieferung.) [Beilage: Isohyëtenkarte für die Periode 1876 bis 1900.]

Austria-Hungary. I. r. Osservatorio marittimo di Trieste.
Rapporto annuale, contenente le osservazioni meteorologiche di Trieste e di alcune altre stazioni Adriatiche per l'anno 1909. 26 volume. Trieste. 1913. 123 p. f°.

Baehr, Alfred.
Zur Landeskunde der Maskarenen. Wien. 1913. 77 p. 4°. (K. k. Geographische Gesellschaft in Wien. 10. Band. Nr. 2.)

Bologna. R. Università. Osservatorio.
Osservazioni meteorologiche dell' annata 1912. Bologna. 1913. 31 p. f°. (Estratto d. ser. 6, t. 10, 1912–13, delle Memorie d. R. Accad. sci. dell' Istituto di Bologna, Classe di sci. fisiche.)

Bouches-du-Rhône. Commission de météorologie.
Bulletin annuel. Année 1912. 31me année. Marseille. 1913. xi, 74, xxxiv p. 4°.

Denmark. Danske meteorologiske institut.
Meteorologisk aarborg for 1910. Anden del: Færøerne, Island, Grønland og St. Croix. Kjøbenhavn. 1913. [iii], 111 p. f°.
Meteorologisk aarbog for 1912. Første del: Kongeriget. Kjøbenhavn. 1913. [iv], 147 p. f°.

Egypt. Survey department.
Meteorological report for the year 1910. Part 1. Helwan observatory. Cairo. 1913. v. p. 9 plates. f°.
The rains of the Nile basin and the Nile flood of 1911. Cairo. 1913. [4] p. l., 110 p. 8 plates. 4°. (Survey department paper, no. 27.)

Ficker, H[einz] von.
Die Erforschung der Föhnerscheinungen in den Alpen. Eine meteorologische Studie. München. 1912. 53–77 p. 4°. (Sonderabdruck aus der Zeitschrift des deutschen u. österreichischen Alpenvereins 1912, 43. Band.)

[Flach, Wilhelm], & *others*.
Ny instruktion för de med statsmedel upprättade stormvarningsstationerna, efter samråd med föreståndaren för Statens meteorologiska centralanstalt utfärdad av Kungl. lantbruksstyrelsen den 11 November 1913. Stockholm. 1913. 10 p. 8°.

Hesselberg, Th.
Die Luftbewegung im Cirrusniveau. Leipzig. 1913. 17–73 p, 8°. (Geophysikalisches Institut der Universität Leipzig. Veröffentlichungen. 2. Ser. Heft 2.)

Innsbruck. Universität. Meteorologisches Observatorium.
Beobachtungen im Jahre 1911. Innsbruck. 1913. [43] p. 8°.

Japan. Central meteorological observatory.
Results of the meteorological observations in Japan for the lustrum 1906–1910. [Japanese and English text.] Tokio. 1913. 345 p. 4°.

Kiebel, Aurel.
Die Temperatur von Mies. Ein Beitrag zur Kennzeichnung des Klimas der Stadt. 1. Teil. Mies. [1913.] 12 p. 8°. (Sonderabdruck aus dem 43. Jahresberichte des K. k. Staats-Ober-Gymnasiums in Mies.)

Modena. R. Osservatorio geofisico.
Osservazioni meteorologiche dell' anno 1910. Notizie sull' osservatorio pel periodo 1908–1912. Modena. 1913. 68 p. f°. (Pubblicazioni no. 27.)

Naturforschender Verein in Brünn. Meteorologische Commission.
27. Bericht. Ergebnisse der meteorologischen Beobachtungen im Jahre 1907. Brünn. 1912. 3 p. l., 151 p. 5 maps. 8°.

Podolia (Russia). Station expérimentale agronomique.
Observations météorologiques pour l'année 1912. [Russian and French text.] Odessa. 1913. [iv], 88 p. 4°. (Extrait du 18me. compte-rendu de la Station expérimentale de Ploty.)

St. Croix (Danish West Indies). Agricultural experiment station.
Report of the work done during the year from [July 1, 1911, to June 30, 1912]. Copenhagen. 1913. 61 p. f°. [Meteorology, p. 52 ffg.]

Saville, Caleb Mills.
Hydrology of the Panama Canal, with discussion by Henry L. Abbot and W. E. Fuller. n. p. [1913.] 871–987 p. 8°. (*Reprinted from* Transactions of the American society of civil engineers, vol. 76, 1913.)

Silva, Giovanni.
Il vento a Padova, nel decennio 1900–1909 e nel quarantennio 1870–1909. Venezia. 1913. 491–541 p. 8°. (Contributi dell' Osservatorio astronomico della R. Università di Padova.)

Wigand, Albert, & Lutze, Georg.
Physikalische Untersuchungen im Freiballon. I. Synoptische Messungen der luftelektrischen Empfangsstörung am Erdboden und im Ballon für verschiedene Luftschichten, mit gleichzeitigen Beobachtungen der Kondensationskernzahl und der luftelektrischen Zerstreuung. Halle a. d. S. 1913. 39 p. plates. 8°. (Naturforschende Gesellschaft zu Halle. Abhandlungen. Neue Folge, No. 2.)

Zi-ka-wei. Observatoire magnétique, météorologique et sismologique.
Bulletin des observations. Tome 35. Année 1909. Météorologie. Chang-hai. 1913. v. p. f°.

RECENT PAPERS BEARING ON METEOROLOGY.

C. FITZHUGH TALMAN, Junior Professor in Charge of Library.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

Aëronautical journal. London. v. 17. October, 1913.
Rawson, H[erbert] E[dward]. Atmospheric waves, eddies, and vortices. p. 245–256.
Ley, C[uthbert] H[illyar]. Vertical motion in atmospheric waves. p. 257–258.

International institute of agriculture. Bureau of agricultural intelligence and plant diseases. Monthly bulletin. Rome. 4th year. November, 1913.
Börnstein, R[ichard]. The agricultural meteorological service in Germany. p. 1667–1672.

Scientific American supplement. New York. v. 76. December 6, 1913.
McAdie, Alexander [G]. New units in aerology. p. 357.

Symons's meteorological magazine. London. v. 48. December, 1913.
Mossman, R. C. Southern hemisphere seasonal correlations. (Sixth article.) p. 200–204.

Astronomie. Paris. 27 année. Décembre 1913.
Angot, Alfred. Sur un mode de classification des hivers. p. 521–523.

Ciel et terre. Bruxelles. 34 année. Novembre 1913.
Perrotin, Henri. La météorologie aéronautique en France. Création au Bureau central météorologique d'un service spécial d'avertissements à l'aéronautique. p. 338–342.
Bertyn, Félix. Action morbide du brouillard. p. 343–346.

Radium. Paris. t. 10. Octobre 1913.
Besson, L[ouis]. Contribution à l'étude de la condensation de la vapeur d'eau par détente dans l'air et divers autres gaz. p. 318–323.

Société météorologique de France. Annuaire. Paris. 61 année. Octobre-novembre 1913.
Raymond, G. Contribution à l'étude des courants supérieurs de l'atmosphère, par la méthode de M. Ventosa. p. 301–308.

Société météorologique de France—Continued.
Moye, Marcel. Sur le dynamisme météorologique dans le bassin de la Méditerranée occidentale. p. 318–323.

Annalen der Hydrographie und maritimen Meteorologie. Hamburg. 41. Jahrgang. Heft 12. 1913.
Schneider, J. Die jährliche und die monatliche Änderungen der Luftdruckverteilung über Mitteleuropa. p. 593–607.

Deutsche Luftfahrer Zeitschrift. Berlin. 17. Jahrgang. November 1913.
Peppler, A. Über vertikale Luftbewegungen. p. 578–580.

Meteorologische Zeitschrift. Braunschweig. Band 30. November 1913.
Köppen, W[ladimir]. Einheitliche Thermometeraufstellung für meteorologische Stationen zur Bestimmung der Lufttemperatur und Luftfeuchtigkeit. p. 513–523.
Hann, J[ulius] v. Bemerkungen über die Beziehungen zwischen den unperiodischen Luftdruckschwankungen und den Temperaturschwankungen. p. 523–532.
Horten, M. Avicennas Lehre vom Regenbogen nach seinem Werk al Schifâ. Mit Bemerkungen von E. Wiedemann. p. 533–544.
Köppen, W[ladimir]. Angabe der monatlichen Regenmengen. p. 544–545.
Schubert, Johannes. Graphische Darstellung meteorologischer Werte. p. 545–547.
H[ann], J[ulius] v. Klima von Montevideo. p. 547–549.
Kassner, C[arl]. Zum strengen Frost von 1709. p. 554–555.
Conrad, V. Föhn in Klangenfurt. p. 557–558.
Láska, V[aclav]. Zur Korrelation. p. 558–560.
Hann, J[ulius] v. Änderung der Grösse der Luftdruckschwankungen mit der Höhe. p. 561–562.
Stuchtey, K. Aufnahmen von hellen Ringen und Säulen um den Ballonschatten und deren künstliche Nachbildung. p. 565–568.
Krieg und Wetter. p. 568–569.
Linke, Franz. Zur Metodik der Reduktion von meteorologischen Autographenaufzeichnungen. p. 569–570.
Defant, Albert. Wasserhosen auf dem Achensee. p. 571–572.

Mitteilungen aus den deutschen Schutzgebieten. Berlin. 26. Band. 1913.
Langbeck, K. Die Niederschlagsregistrierungen an der Pflanzstätte Idenau (Sanje) am Kamerungebirge vom April 1910 bis März 1911. p. 156–158. (2. Heft.)
Jahresbericht über das meteorologische Beobachtungswesen im südwestafrikanischen Schutzgebiet für die Zeit vom 1. Juli 1911 bis 30. Juni 1912. p. 164–180. (2. Heft.)
Heidke, P. Meteorologische Beobachtungen aus Togo. Teil IV. Zusammenstellung der Monats- und Jahresmittel aus dem Jahre 1912 an elf Beobachtungsstationen. p. 181–210. (3. Heft.)
Weiss, M. Regen- und Meerestemperatur-Messungen im Schutzgebiet Togo 1912. p. 211–213. (3. Heft.)

Physikalische Zeitschrift. Leipzig. 14. Jahrgang. 1913.
Neesen, F[reidrich]. Versuch der Zentralstelle für wissenschaftlich-technische Untersuchungen in Neu-Babelsberg über die Blitzschutzvorrichtungen für Sprengstoffanlagen. p. 1240–1242. (1. Dez.)
Elster, J., & Geitel, H. Zur Influenztheorie der Niederschlagselektrizität. p. 1287–1292. (15. Dez.)
Schindelhauer, F. Über die Elektrizität der Niederschläge. Erwiderung auf die Ausführungen des Herrn G. C. Simpson. p. 1292–1296. (15. Dez.)

Prometheus. Berlin. 25. Jahrgang. November 29, 1913.
Philippsen, H. [Fische als Wetterpropheten.] p. 142–143.

Wetter. Berlin. 30. Jahrgang. November 1913.
Linke, Franz. Erfahrungen aus der Praxis des Luftfahrer Wetterdienstes. p. 241–247.
Thraen, August. Die Wärmedepressionen im Mai und ihr Einfluss auf den Niederschlag an der deutschen Nord- und Ostseeküste. p. 247–256.

Zeitschrift der Gesellschaft für Erdkunde. Berlin. No. 8. 1913.
Süring, R[einhard]. Der jetzige Stand der Kenntnisse vom Gesamtkreislauf der Atmosphäre. p. 600–610.

Zeitschrift für Gletscherkunde. Berlin. Band 7. Oktober 1913.
Brückner, Ed[uard]. Moorbildungen und postglaziale Klimaschwankungen am Nordsaum der Ostalpen. p. 334–340.

Hemel en Dampkring. Den Haag. 11. Jaargang. November 1913.
S. Zonneschijn en Bewolking. p. 106–108.

Académie Roumaine. Section scientifique. Bulletin. Bucarest. 2 année. Nr. 1. 1913.
Teclu, Nicolas. Studien über die atmosphärische Elektrizität. p. 16–29.

VARIATIONS IN RAINFALL IN CALIFORNIA.[1]

By WILLIAM GARDNER REED.

That the seasonal precipitation for stations in California varies widely from year to year is well known and there is, at least in some instances, a correspondence of dry and wet seasons in different parts of the State. In view of the economic importance of rainfall to the State of California and also of the fact that correlations of wet and dry seasons have been made covering a period before the beginning of the records in the State, it was deemed advisable to undertake a careful investigation of the records published as trustworthy by the United States Weather Bureau to determine the relations of wet and dry periods and to ascertain if a periodicity of wet and dry seasons exists; the area of the State suggested that there might be more than one rainfall unit, and the study was directed also to the determination of the extent of these units and to the relations between such as might be found. This paper presents the results of a preliminary study of the conditions during the period from 1880 to 1910. The data are from the published records of the United States Weather Bureau for about 30 stations. No attempt has yet been made to supply gaps in the data, as it was thought best to begin with data about which there could be no question that they represent actual rainfall conditions at particular places. Later it may be possible to make use of partial or interpolated data, but at first this was not regarded as admissible.

Because of the winter maximum of rainfall and the dry or nearly dry midsummer, the time unit in a rainfall discussion for California must be a rainfall year, beginning at some time during the dry season; as it is customary to make use of a rainfall year for California which begins July 1, this year is locally known as a "rainfall season." Fortunately California is so situated that the whole State is included in the region of the "subtropical" rainfall régime and, therefore, it is necessary to consider only variations in the seasonal amounts of rainfall in the different parts of the State as long as the study is restricted to California. If a comparison between the rainfall variations in California and those in the rest of the United States or other parts of the world is to be undertaken, there must be some compromise to obtain a satisfactory time unit of rainfall amounts, unless the seasonal amount of precipitation in California is to be compared with the amount for some other unit in another region. For portions of the country in which the rainfall distribution is uniform or nearly so throughout the year the calendar year, beginning January 1, and a seasonal year, beginning July 1, are equally satisfactory as time units; the calendar year is generally made use of for simplicity of statement and from custom. For the portions of the country which have a summer maximum, or a distinct summer rainfall, the calendar year, or at least a year beginning at some time during the winter, is desirable; and, as the calendar year conforms with custom, this year is made use of. Therefore, in all parts of the country, except in the Pacific Coast region, the calendar year is the accepted time unit for rainfall; but in this region the calendar year brings together in the same time unit a spring and an autumn which belong to different rainfall units, and separates the spring and the autumn which belong together. For the present, at least, no attempt will be made to correlate Californian conditions with those of other regions, although it may well be that the amount of precipitation in a California season bears some very close relation with the amount in the following or preceding calendar year in other parts of the country, or with other units elsewhere. A reasonable degree of order in the California correlation seems desirable before attempting to group the conditions over a wider area.

For a study of this kind it is essential that no data, other than the actual measurements of precipitation, checked and certified by a recognized authority, be used. Unless this is the case the records can not be regarded as sufficiently comparable to be subjected to rigid statistical treatment. However valuable botanic and geologic data may be, and there can be no question that such records are of immense use when properly read, a determination of rainfall conditions should in the first place be determined by the use of rainfall statistics. After this has been done, the botanic or geologic record may be examined for parallelisms, and these records may be translated into terms of rainfall; but in every case such use of natural records involves a translation from one type of record into an entirely different type. There can, of course, be no doubt that the natural records are true and correct, but there are almost unlimited possibilities for incorrect interpretations of these records.

This study is based on the published records of the Weather Bureau, including all the stations which have carried on continuous observations of rainfall since 1881. There are twenty-eight such stations, if Yuma, Arizona, where the observations were made at Fort Yuma, California, from 1870 to 1875 and which station may be regarded as representing southeastern California conditions, is included in the list of California stations. Eureka was also included in the hope of determining the conditions in the regions where summer rains are not as rare as in central California. The map, figure 1, shows the approximate location of the stations used. The following table shows the length of record at each station, the numbers are those used to mark the locations on the map:

Number (See fig. 1).	Station.	Year of beginning of record.	Number (See fig. 1).	Station.	Year of beginning of record.
1	Eureka	1886	16	Santa Barbara	1867
2	Ukiah	1877	17	Los Angeles	1877
3	Calistoga	1873	18	San Diego	1850
4	Napa	1877	19	Red Bluff	1878
5	Fort Ross	1875	20	Tehama	1871
6	Oakland	1874	21	Chico	1871
7	San Francisco	1849	22	Auburn	1871
8	San Mateo	1874	23	Sacramento	1849
9	Niles	1871	24	Stockton	1867
10	San Jose	1874	25	Modesto	1871
11	Santa Cruz	1878	26	Fresno	1881
12	Gilroy	1874	27	Tulare	1876
13	Hollister	1874	28	San Bernardino	1870
14	Soledad	1874	29	Yuma (and Fort Yuma).	1870
15	San Luis Obispo	1869			

There are a number of other stations for which data for one or more months have been interpolated, but as

[1] Presented at the meeting of the Cordilleran Section of the Geological Society, April 11, 1913.

interpolation is based upon the assumption that rainfall conditions are not entirely local, and one of the objects of this study is to determine how far conditions in different parts of the State are identical, no interpolated data have been used, and the record from no station not complete since 1881 has been considered. In a more intensive study it will be possible to use those parts of the records which are the results of actual observation, but, as will be seen later, the method of smoothing the curves for use introduces whatever error there may be in interpolation over a period of five years.

Although the method of comparing rainfall data by means of the plotted curves has its dangers, these are far outweighed by the advantages of the method. The relative significance of numbers is difficult to comprehend when there are a great many of the numbers; maximum

FIG. 1.—Map of California, showing the location of the stations. (For the names of the stations and the length of the records *see* page 1785.)

and minimum amounts appear only upon close examination; and the relative position of the maxima and minima does not stand out as clearly as in curves. In the consideration of a number of stations as great as even that of the California stations with 30-year records, curves become almost a necessity for a comparative study.

The first attempt was, of course, to deal with the curves plotted from the actual data computed from the observations by adding together the amounts of precipitation for each season at each station. This is the form in which the data are published by the Weather Bureau. The curves for a number of long-term records were plotted, but an examination of the curves showed that the fluctuations from season to season are so wide and so irregular that any general tendencies lasting more than one season are very poorly shown or entirely obscured, except in the more extreme cases; and even in the extreme cases the amplitude of the variation and the position of the middles of the excess and deficiency periods were more or less obscure. A fair sample of the type of curve obtained is shown by figure 2, which is the seasonal amount of rainfall at San Francisco from 1849 to 1912, inclusive.

This state of affairs necessitated some simplification of the curves before a successful comparison could be made. Such a simplification involves a suppression of the actual amounts of rainfall for the individual years or seasons and the substitution of artificial amounts which shall show the general conditions without too much emphasis upon the special conditions which control the actual amount in a single season. To obtain such conditions it is usual to "smooth" the curves. Various methods of smoothing rainfall curves have been discussed elsewhere.[1] Free-hand smoothing is not desirable because of the extreme complexity of the curves and the tendency to personal bias, especially toward introducing more parallelism between the curves for different stations than exists. Smoothing by the use of a formula, although involving an immense amount of computation, offers the most sat-

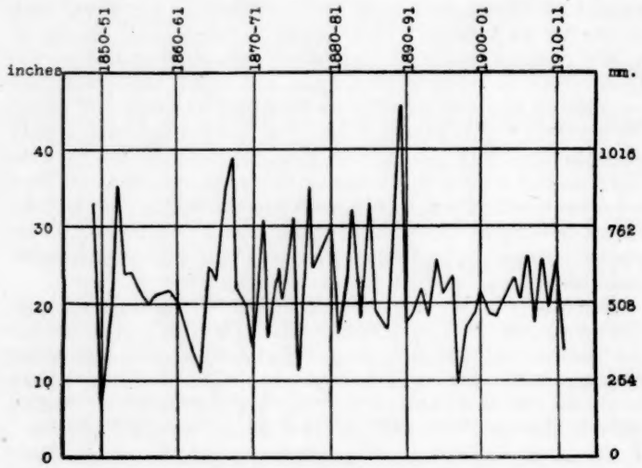

FIG. 2—Seasonal rainfall at San Francisco, Cal., 1849-1912.

isfactory curves. Differences in formulæ will give different curves; but, if the same formula is used for all the curves, the results will be comparable, and if the formula has been found satisfactory in showing general conditions, it will serve the purpose of furnishing smoothed curves for comparison, even though the individual curves are not quite correct. As Blandford's formula has been satisfactory in showing the general tendencies, it has been adopted for this study. In this formula [2] the position of the curve for any season depends upon the amounts for the two seasons next preceding and the two next following, as well as upon the amount for the season in question; the more distant seasons are weighted less heavily than the one for which the "artificial" amount is desired. From the curves thus plotted the tendencies restricted to single years show only in a restricted manner, while those extending over a series of years retain their force.

After plotting the curves for the stations with the proper records, these curves were attached to a large map of California at approximately the correct geographical location of the stations, so that the geographical relations of the curves might be studied and to determine if there

[1] See Beals, E. A. Variations in Rainfall, Mo. Weather Rev., vol. 39, pp. 1448-1452. 1911. Reed, W. G. The Rainfall of Berkeley, Cal., Univ. Cal. Pub. Geog., vol. 1, No. 2, pp. 63-79. 1913.

[2] $\frac{A\ 4B\ 6C\ 4D\ E}{16}$ = C', where A, B, C, D, and E are the amounts for successive seasons and C' is the corrected amount for them iddle year of the group of five seasons which is used in place of the actual amount for the season in plotting the smoothed curve.

was any similarity between the curves of the same region and if there were any differences in the different regions of the State. At the same time an attempt was made to group the curves themselves without regard to their location. By these means it was possible to provide a check to personal bias and to prevent unlike curves being forced together because of their propinquity on the map, and also to correct any tendency to overlook likenesses in

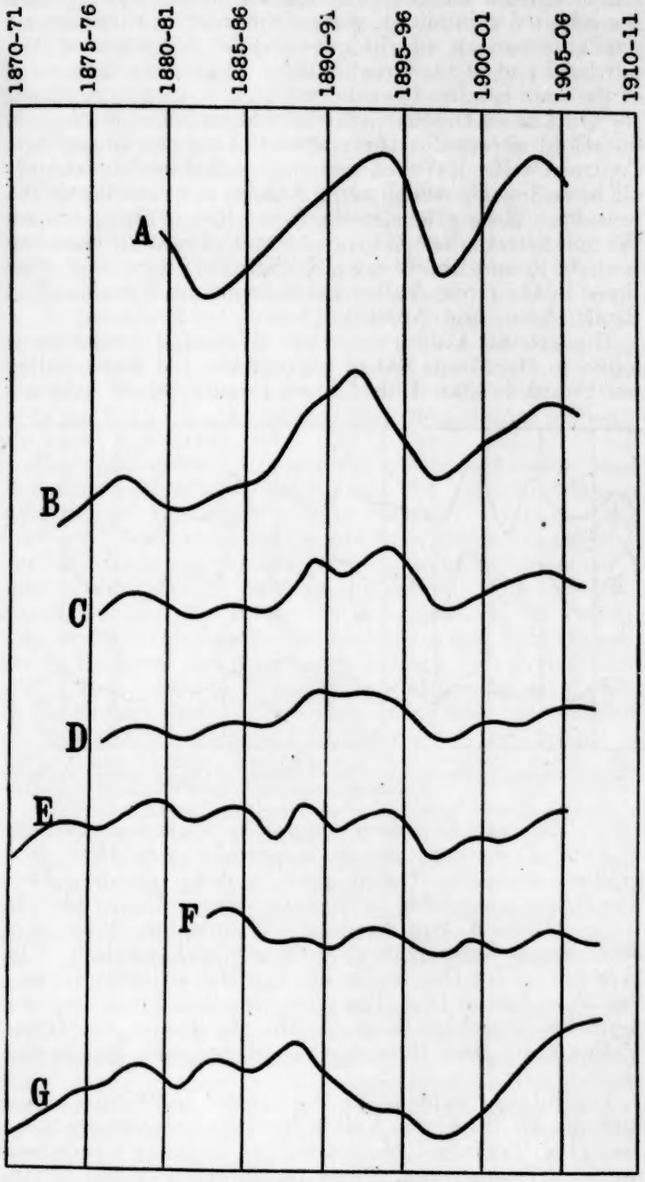

FIG. 3.—Type curves of seasonal rainfall in California:

(A) North Coast, Ukiah; (B) North Valley, Tehama; (C) Central Coast, San Mateo; (D) Central Coast, San Jose; (E) Central Valley, Sacramento; (F) Southern Valley, Fresno; (G) Southern station, Santa Barbara.

curves of stations far from each other. The groups made by the two methods correspond very closely. On the basis of the preliminary study of the curves the following types of rainfall variation have appeared: (1) a northern California type (curves A and B in figure 3), (2) a central California type, which may, perhaps, be subdivided into a coast subtype (curves C and D in figure 3) and an interior subtype (curves E and F), and (3) a southern California type (curve G).

In the region where the northern California type of rainfall variation prevails the general conditions are shown by the smoothed curves for a station in the Coast Range region, Ukiah in Mendocino County (curve A) and for a station in the Great Valley, Tehama in Tehama County (curve B). The variations in the smoothed curves show minimum rainfall conditions in the early eighties, maximum in the early nineties in the Great Valley and in the middle nineties in the Coast Range region, minimum again in 1897–98 and a maximum in 1904–05 in both the Coast Range and the Great Valley regions. This last maximum is followed by a tendency toward a minimum but the curve has not been carried far enough along to show

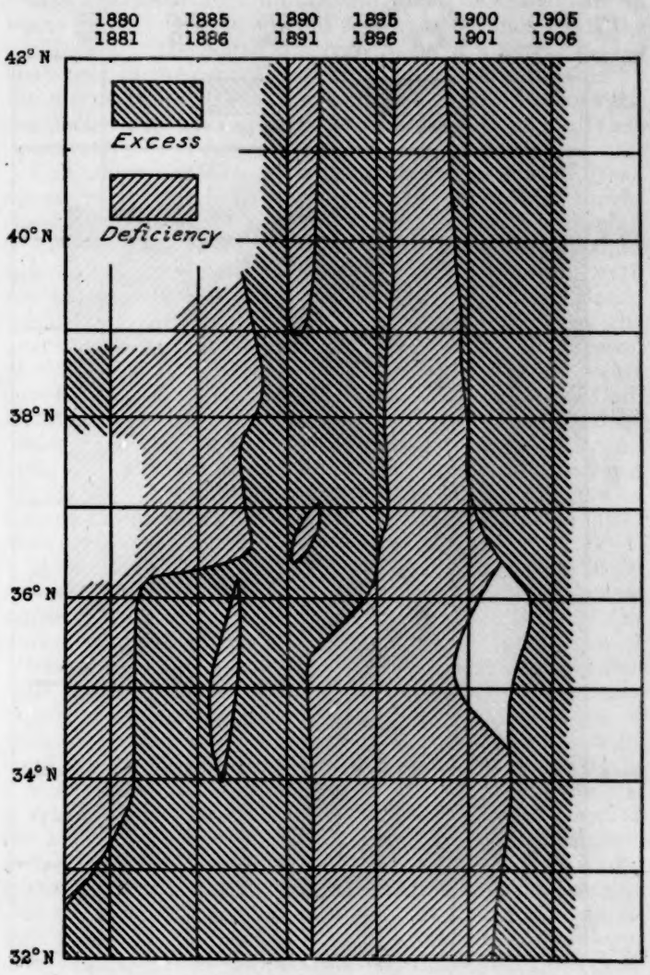

FIG. 4.—Rainfall conditions at coast stations from smoothed curves.

the date of the minimum conditions. The amplitude of the oscillation in this region is somewhat regular, but the period, if any exists, has not yet appeared from the curves as there has been but one complete oscillation during the term of the record and the time of this complete oscillation was not the same at all the stations studied.

In figures 4 and 5 the departures from the average rainfall for the time of the record at each station have been shown at the latitude of each station by years, the ordinates representing the latitude of the station and the abscissæ the years of the record. In figure 4 the data for stations in the Coast Range region and the southern California coast have been plotted and in figure 5 those for the Great Valley, including the Tulare Basin, and the

southern California region away from the coast. These diagrams show similar conditions of departure over the northern Coast Range and Great Valley regions. The diagrams show nothing of the character of the curves of rainfall variation, except the fact of excess or deficiency from the average, and, as the averages at the different stations are based on different years of record, they can not be regarded as absolutely trustworthy in showing the actual conditions, although they are probably valuable as indicating tendencies.

A feature of figure 4, the Coast group, is the beginning of the first epoch of excess precipitation five years or more earlier in the southern portion than in the northern;

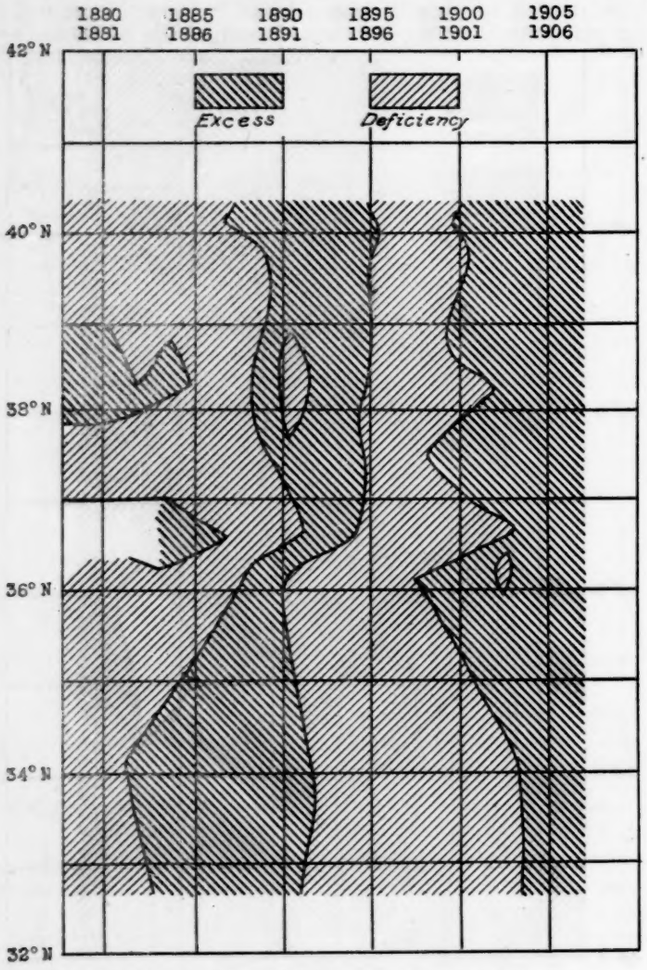

FIG. 5.—Rainfall conditions at interior stations from smoothed curves.

the advanced beginning in the south of the epoch of deficiency of the late nineties is nearly as marked. The boundaries of the belts are less regular in figure 5, the Interior group, but the same tendencies are shown here. The division between the southern and the northern portions of the regions is at about latitude 36½°. The epoch of excess which ends the record in each case does not show the early beginning in the south.

The district in which the northern California type of variation predominates includes the Coast Range region north of San Francisco Bay, with the exception of the southern part of Napa County and the northern end of the Great Valley of California. The records in the extreme northern part of the State are few in number and are all of shorter length than the minimum adopted for this study. It may later be advisable to attempt to determine the conditions north of the region for which the records are of reasonable duration by a study of the shorter records or the consideration of the Oregon records. For the present it is sufficient to state that data are wanting in the Coast Range region north of Ukiah (except Eureka, which has a record shorter than the adopted minimum), and in the interior there are no available records of the required length north of the northern end of the Great Valley. The eastward extent of the area has not been determined, as the records from the stations in the Sierra Nevada Mountains are of short duration; except for the stations along the line of the Central Pacific Railroad and east of Auburn the records all have breaks, which render them unavailable at the present. The stations in the Coast Range region, where the northern California type of curve of rainfall variation is to be found are Eureka, Ukiah, Calistoga, and Fort Ross; in the Great Valley the stations are Tehama, Red Bluff, Chico, and Auburn.

The central California type of rainfall variation is found in the Coast Range region from the Napa Valley southward to San Luis Obispo County, about latitude

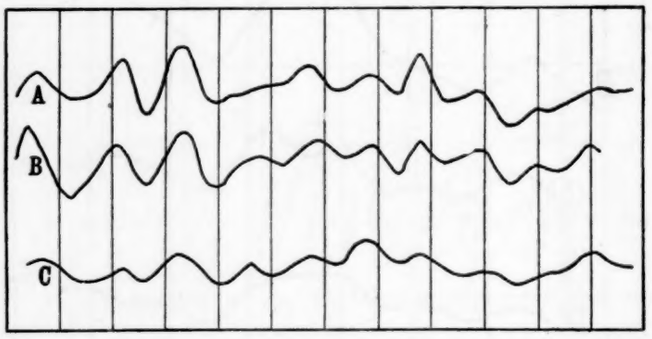

FIG. 6.—Smoothed curves for longest-period stations: (A) San Francisco; (B) Sacramento; (C) San Diego.

36°. The exact boundary can not be determined because of lack of stations, but it is probable that there is a gradual transition rather than a sharp dividing line. The stations available in the Coast Range region include Napa, Oakland, San Francisco, San Mateo, Niles, San Jose, Santa Cruz, Gilroy, Hollister, and Soledad. The type curves for this region are San Mateo (curve C) and San Jose (curve D). The curve for San Francisco (see figure 6) resembles those for the stations in the Great Valley more than those for the other Coast Range stations.

The interior subtype of the central California region includes all the Great Valley from its extreme southern end (the Tehachipi Mountains) to a point somewhere north of Sacramento. This region includes the Tulare Basin at the southern end of the Great Valley, although this basin is a region of interior drainage, except in very unusual cases. The available data are from Sacramento, Stockton, Modesto, Fresno, and Tulare. Typical smoothed curves for the central California region are those for Sacramento (curve E, fig. 3) and Fresno, representing the Tulare Basin conditions (curve F, fig. 3). Their difference from the Coast Range curves is apparent. There is a difference in the character of the curves from the Coast Range stations and those from the Great Valley stations which has led to the suggestion of

two subtypes in the region, but these differences are, in general, the appearance of the curves rather than in specific, tangible features and may be due to total amounts of rainfall as much as anything. In the central California group of stations there is a tendency toward a greater number of maxima and minima than in the region to the north and that to the south. This is not so clearly shown in the diagrams of departure from the average conditions, as the tendency is to break the maximum with a weak minimum, and the minimum with a weak maximum, and not to show a variation which takes the curve below or above the average. Further smoothing of the Coast Range curves would bring them into more or less accord with the curves for the northern stations, but such is not so clearly the case with the Valley stations and with San Francisco.

The variations in rainfall in the Tulare Basin (see curve for Fresno, F in fig. 3) show the same type of oscillation as the other curves for the Great Valley stations in the central California region, but the amplitudes of the oscillation are not always the same. In figure 5 the times of the periods of excess and deficient precipitation do not agree with the times for the other part of the Great Valley, but this is probably due to the shorter observation period of the record and the consequent different relation between the average amounts and the seasonal amounts shown by the curves.

The whole of the State south of the central region, that is south of Monterey County and the Tehachipi Mountains, shows the same type of rainfall variation. The curves from the coast region and from the desert are very similar, in spite of the wide differences in the amounts of rain in the different parts of the region. The curve for Santa Barbara (G in fig. 3) is typical of the region. The available stations in the region are San Luis Obispo, Santa Barbara, Los Angeles, San Diego, San Bernardino, and Yuma. It is to be regretted that there is no station in the Mojave Desert or in Owens Valley which is available for this study. There are partial records for stations in both these regions, but there is none which meets the minimum requirements of the preliminary study. When a proper statistical method has been found it will probably be possible to use such parts of the records as may be available and to get some idea, at least, whether these regions belong to one of the three rainfall districts or whether they constitute a fourth district. For the present they must be classed with the extreme northern part of the State and the Sierra Nevada Mountains and omitted for want of data.

Perhaps the most striking condition shown by the preliminary study is the difference in the rainfall variation in different latitudes in California. When the curves were placed in their proper geographical position on the map of the State, it was seen that there was a general series along the coastal part of the State, in the region which may be called, for convenience, the Coast Ranges, and another series from the northern end of the Great Valley southward across the desert region of the southeastern part of the State. The departures from the average seasonal rainfall for stations in the Coast Range region are shown at the proper latitudes for the stations in figure 4, and similar relations for the interior stations are shown in figure 5. The attempt to classify the curves on the basis of the latitude of the stations alone was not successful, and the same was true in the attempt to classify the excesses and deficiencies on a simple latitude basis. After the curves had been divided into a Coast Range class and an interior class, the diagram of excesses and deficiencies for each class with the stations arranged by latitude became much simpler.

In drawing the diagrams the divisions between the seasons of excess and those of deficient precipitation were marked along the line representing the latitude of each station. After these divisions had been indicated, the points were connected freehand and the areas of excess and deficiency indicated by shading. The two diagrams (figs. 4 and 5) show only the algebraic signs of the departtures from the averages and indicate nothing in regard to the amount of the departure. As the departures are measured from the averages of the periods of the records and these do not all represent the same seasons the diagrams are essentially unfair and must be inaccurate in many places. But in spite of this, at least since 1881, the oscillation in the south is shown to be of a longer period than that in the central region which is also indicated by the curves, where no averages are shown and where the oscillation without regard to average conditions is all that appears.

The season of 1889–90 is remembered as one of great excess of rainfall. In most cases the smoothed curves show that this season occurred during an epoch of rainfall in excess of the average. This is true for all the stations in the Coast group and for those in the Valley group, with the possible exception of stations in the Tulare Basin, where the "artificial" amount was not far from the average amount for the period of the records. The season of 1897–98 was one of the driest within the 30 years covered by this study in most or all of the stations in California; this is the only reputed "dry year" in the period under discussion, as the seasons ending June 30, 1912, and June 30, 1913, are at the end of the record and can not appear in the smoothed curve. The season appears in figures 4 and 5 as a part of an epoch of precipitation lower than average in amount.

It should be noted, however, that the season of 1889–90 is not at the crest of the epoch of excess for the smoothed curves throughout the State and that the trough of the period of deficiency is not in all cases at the season of 1897–98. But it is true that these strongly marked seasons had the same characteristics throughout the State and in so far as the characteristics of single seasons of wide departure may be trusted they show State-wide conditions. Where the departures are not so great in amount, the conditions of excess or deficiency from the average are not nearly as well marked and the extent of the area in which like conditions occurred is much smaller.

While many interesting lines of investigation are suggested by the diagrams, it seems best to present them at this time without further comment, as the proper statistical method for the treatment of the data has not yet been determined. That the variations in different regions have been similar, although not identical, is shown by figure 6, where the smoothed curves for the longest records in California, A for San Francisco, B for Sacramento, and C for San Diego, have been plotted with the same time scale and equal amount scales. The most noteworthy features of this set of curves are the occurrence of the crests and troughs at the same seasons in the great majority of the cases, the somewhat close parallelism between the San Francisco and Sacramento curves, and the considerable difference in the amounts of the departures shown by the San Diego curve from the amounts shown by the other two curves.

In view of the incomplete state of the work and the absence of any satisfactory statistical method of handling the data, the study has not been carried further. The

preliminary investigation indicates the necessity of a careful study of all the records, in order to determine exactly what the rainfall variations in the State have been, so that these results may be compared with the evidence of an indirect character to determine just what rainfall conditions are associated with botanical and geological features, and thus the curves of accurate rainfall measurements carried back of the beginning of the data.

On the basis of a study of the rainfall data for stations in California with a record of 30 years' duration the following tentative conclusions may be drawn:

1. Rainfall in California varies in amount within wide limits.

2. In a very general way the variation is similar in character but not in amount throughout the State.

3. Variations more or less similar in character and amount are to be found in each of the following districts of the State: (*a*) California north of latitude 38° or 39°; (*b*) the Coast ranges from Napa County south to San Luis Obispo County; (*c*) the Great Valley of California south of latitude 39°; (*d*) Southern California, that part of the State south of San Luis Obispo and the Tehachipi Mountains. No data are available for Owens Valley and the Mojave Desert, or for northern and eastern California.

4. The period of oscillation of the seasonal amounts of rainfall is longer south of latitude 35° than north of this line.

5. The "wet year," 1889–90, and the "dry year," 1897–98, were nearly or quite State-wide. Data are lacking for the other reputed wet and dry years.

6. It is evident that careful statistical analysis of the data and rigid treatment of the results are necessary before any safe conclusions can be drawn regarding rainfall oscillations in the State.

UNIVERSITY OF CALIFORNIA,
Berkeley, October 6, 1913.

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given for the various sections of the climatological service of the Weather Bureau the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION, BY SECTIONS, NOVEMBER, 1913.

Section.	Temperature (°F.).							Precipitation (inches and hundredths).					
			Monthly extremes.							Greatest monthly.		Least monthly.	
	Section average.	Departure from the normal.	Station.	Highest.	Date.	Station.	Lowest.	Date.	Section average.	Departure from the normal.	Station.	Amount.	Station.	Amount.
Alabama	56.5	+2.1	2 stations	88	21†	Scottsboro	16	11	1.36	−1.60	Daphne	3.92	Andalusia	0.20
Arizona	53.6	+1.9	Parker	98	6	Flagstaff	12	29	2.14	+1.12	Thomas	5.75	Yuma	0.15
Arkansas	57.6	+6.8	Lewisville	85	18	Pond	20	9	2.53	−1.01	Dutton	5.16	Princeton	T.
California	52.2	−0.7	Ojai Valley	97	8	Tamarack	− 3	29	5.00	+2.19	Helena Mine	19.29	Bagdad	0.00
Colorado	38.6	+3.7	Canon City	80	10	2 stations	−12	23†	0.96	+0.07	2 stations	3.36	2 stations	0.00
Florida	65.5	+0.9	Orange City	89	24	Brooksville	25	10	0.99	−1.30	Homestead	9.28	Rockwell	T.
Georgia	55.0	+0.2	Valdosta	89	22	Ramhurst	14	11	0.95	−1.63	Waycross	3.67	Fort Gaines	0.00
Hawaii [for October]	74.6	.....	2 stations	93	1†	Humuula	41	1	4.16	.....	Wahiawa	16.60	Paauhau	0.17
Idaho	38.5	+2.3	3 stations	70	1†	Kilgore	− 6	21	2.94	+0.95	Priest Riv. Sta. No. 1	7.44	Irwin	0.09
Illinois	48.1	+6.9	.....do	80	19†	2 stations	11	11	3.15	+0.29	Montrose	6.38	Dixon	0.76
Indiana	47.4	+5.3	Mount Vernon	80	22	Collegeville	10	10	3.89	+0.77	Huntingburg	8.12	Laporte	2.02
Iowa	44.1	+8.2	Lamoni	78	19	Elma	10	11	1.18	−0.21	Corning	3.49	Lake Park	0.20
Kansas	49.3	+6.5	Wellington	86	21	Oberlin	6	10	1.70	+0.46	Ashland	4.82	Saint Francis	0.20
Kentucky	50.4	+4.5	Beattyville	81	22	Farmers	8	11	3.21	−0.22	Owensboro	6.12	Franklin	0.83
Louisiana	63.7	+4.4	Reserve	95	4	Grand Cane	20	10	2.73	−0.69	Reserve	6.01	Tallulah	0.76
Maryland & Delaware	47.0	+2.5	Westernport	87	22	Deer Park	10	12	2.10	−0.56	Grantsville	4.38	Pocomoke City	0.67
Michigan	40.4	+4.9	Clinton	73	2	Humboldt	− 1	15	2.02	−0.39	Iron River	3.60	Greenville	0.65
Minnesota	36.9	+8.4	Warren	69	17	Itasaca State Park	− 6	14	0.66	−0.36	Caledonia	2.07	Bagley	0.04
Mississippi	59.1	+4.3	5 stations	85	18†	Tupelo	21	11	2.49	−1.04	Columbia	6.27	Grenada	0.40
Missouri	51.7	+7.4	Caruthersville	80	22	Goodland	11	11	2.73	+0.35	Lamonte	4.82	Unionville	0.25
Montana	36.4	+5.0	Stacey	72	17	Bowen	−10	24	0.77	−0.26	Saltese	4.78	2 stations	0.04
Nebraska	43.3	+7.2	Grant	82	11	Hillside	4	24	0.85	+0.15	Falls City	3.48	Haigler	0.00
Nevada	40.3	+1.8	2 stations	83	7	Halleck	− 5	30	1.28	+0.48	Lewers Ranch	3.33	Potts	0.06
New England	41.4	+3.5	Cornish, Me	75	20	Van Buren, Me	− 6	28	2.27	−1.68	Somerset, Vt	6.36	Patten, Me	0.20
New Jersey	46.2	+3.2	2 stations	77	20	Culvers Lake	19	11	2.71	−0.71	Charlotteburg	4.89	Asbury Park	1.00
New Mexico	46.1	+3.4	Logan	88	6	Elizabethtown	2	5	1.39	+0.70	Pinos Altus	4.10	Bluewater	0.15
New York	41.3	+4.6	Keene Valley	80	6	Indian Lake	8	27	3.97	0.00	Liberty	5.83	Chazy	0.22
North Carolina	50.2	+0.3	Newbern	85	23	Banners Elk	12	1†	1.72	−1.15	Gorge	3.89	Southport	0.46
North Dakota	34.1	+8.3	Forman	77	6	Marstonmoor	− 2	14	0.22	−0.38	Donnybrook	0.68	5 stations	T.
Ohio	44.4	+3.7	3 stations	78	7†	2 stations	2	12	3.52	+0.83	Cadiz	5.21	Youngstown	1.66
Oklahoma	55.5	+5.5	Buffalo	87	18	Hurley	20	24	3.61	+1.61	Healdton	12.88	Hurley	0.50
Oregon	42.4	+0.9	Comb's Flat	76	2†	Seneca	5	23	4.39	−0.19	Glenora	25.67	Richland	0.20
Pennsylvania	43.9	+3.5	Indiana	79	21	Somerset	10	11	3.05	+0.27	Uniontown	6.34	2 stations	1.43
Porto Rico	75.7	−0.9	2 stations	96	2†	Aibonito	45	5	5.30	−2.54	Rio Grande	22.72	Mayaguez	1.09
South Carolina	53.5	−0.4	.....do	89	22	Greenville	18	11	1.79	−0.48	Blairs	4.03	Allendale	0.80
South Dakota	39.8	+7.8	.....do	76	3†	Ipswich	1	14	0.38	−0.10	Parkston	1.21	2 stations	T.
Tennessee	52.2	+3.9	3 stations	80	21†	Rugby	6	11	1.46	−2.24	Rugby	2.58	Wildersville	0.37
Texas	62.7	+5.9	2 stations	92	16†	Romero	16	5	3.99	+1.57	Somerville	11.85	Marfa	0.15
Utah	39.6	+1.7	Fillmore	80	10	Scofield	−17	22	1.70	+0.77	Ranch	5.88	Whiterocks	0.08
Virginia	48.4	+2.5	Fredericksburg	81	20	Burkes Garden	10	2	2.15	−0.27	Buchanan	4.65	Williamsburg	0.70
Washington	41.4	+0.9	Deer Park	73	3	Snyders Ranch	12	13†	5.33	−0.28	Quinlault	26.90	Hanford	0.75
West Virginia	44.5	+2.2	3 stations	82	19†	Lost Creek	− 1	12	4.49	+2.00	Pickens	8.83	Princeton	1.90
Wisconsin	39.0	+6.6	Racine	71	21	Long Lake	4	15	1.54	−0.13	Port Washington	2.92	Antigo	0.52
Wyoming	34.1	+3.5	Wheatland	77	17	Grand Canyon, Y. N. P.	−16	24	0.85	+0.09	Thumb, Y. N. P.	3.42	Chugwater	0.00

† Other dates also.

TABLE I.—*Climatological data for United States Weather Bureau stations, November, 1913.*

Districts and stations.	Elevation of instruments.			Pressure in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with 0.01 or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
New England.							**43.5**	**+ 4.2**								**73**			**73**	**1.77**	**− 1.8**								**6.0**		
Eastport	76	67	85	30.00	30.08	+ .07	40.4	+ 3.6	67	20	47	18	28	34	30	37	33	76	0.90	− 3.2	7	8,513	sw.	42	e.	9	8	7	15	6.4	0.1	....
Greenville	1,070	6	....	28.88	30.08	.....	34.0	.....	65	7	42	4	28	26	39	....	....	....	2.98	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.5	3.5
Portland, Me.	103	82	117	30.00	30.12	+ .08	41.4	+ 3.8	70	20	48	20	28	34	29	36	30	67	1.20	− 2.6	8	6,948	sw.	38	se.	9	15	4	11	5.3	0.8	....
Concord	288	70	79	29.80	30.12	+ .06	39.9	+ 3.1	70	20	49	19	27	31	46	....	....	....	1.76	− 1.6	9	3,842	nw.	28	se.	9	8	8	14	6.1	6.4	3.5
Burlington	404	11	48	29.65	30.10	+ .05	40.2	+ 6.5	65	9	48	20	27	33	27	....	....	....	0.68	− .19	6	10,549	s.	58	s.	10	5	11	14	6.4	3.8	T.
Northfield	876	12	60	29.14	30.11	+ .06	38.0	+ 6.0	66	23	48	15	38	28	44	34	32	82	1.77	− .08	11	6,143	s.	44	s.	9	5	8	17	6.7	5.7	2.2
Boston	125	115	188	29.98	30.12	+ .07	46.5	+ 5.3	71	20	54	27	27	39	29	41	35	70	2.15	− 2.0	6	7,695	w.	31	w.	4	13	5	12	5.3	T.	....
Nantucket	12	14	90	30.11	30.12	+ .07	46.6	+ 1.4	64	8	52	32	1	41	20	44	40	80	1.91	− 1.4	10	12,165	w.	47	ne.	29	6	11	13	6.3	T.	....
Rock Island	26	11	46	30.09	30.12	+ .06	47.6	+ 2.3	63	20	52	33	27	43	17	43	38	71	2.24	− 1.6	5	14,679	sw.	49	ne.	29	8	13	9	5.7	.....	....
Narragansett	.....	9	.....	.....	.....	.....	45.5	+ 3.2	70	20	54	24	1	37	26	.....	.....	.....	2.99	.....	9	.....	nw.	.....	.....	.....	14	9	7	.....	.....	....
Providence	160	215	251	29.95	30.13	+ .06	45.8	+ 5.4	70	20	53	26	27	39	24	41	36	71	1.96	− 1.9	7	9,460	nw.	56	se.	9	8	11	11	5.6	0.4	....
Hartford	159	122	140	29.95	30.13	+ .05	44.5	+ 5.0	70	20	52	26	27	37	29	40	35	73	2.12	− 1.7	8	5,955	nw.	38	se.	9	8	8	14	6.2	0.7	....
New Haven	106	117	155	30.02	30.14	+ .07	45.4	+ 4.1	72	20	53	27	27	38	28	40	34	68	2.74	− 0.8	7	6,315	n.	46	se.	9	8	10	12	5.8	0.4	....
Middle Atlantic States.							**47.1**	**+ 3.2**								**73**			**73**	**2.06**	**− 0.7**								**5.6**		
Albany	97	102	115	30.02	30.12	+ .04	42.8	+ 4.4	68	20	50	26	28	36	30	38	34	72	1.48	− 1.3	10	5,615	s.	39	s.	9	8	9	13	6.2	0.4	....
Binghamton	871	10	69	29.17	30.12	+ .03	43.5	+ 5.9	70	21	51	26	27	36	38	....	....	....	2.57	+ 0.3	10	4,064	nw.	26	s.	9	2	6	22	8.3	2.3	....
New York	314	414	454	29.80	30.15	+ .06	46.9	+ 2.9	70	20	54	28	11	40	23	42	36	70	1.91	− 1.5	6	13,244	sw.	64	se.	9	8	8	14	6.2	.....	....
Harrisburg	374	94	104	29.76	30.18	+ .07	46.4	+ 4.7	72	19	54	30	11	39	29	41	36	72	1.68	− 0.7	7	4,734	w.	32	sw.	10	8	6	16	6.4	0.8	....
Philadelphia	117	123	184	30.04	30.17	+ .07	48.9	+ 4.0	74	20	56	30	11	42	24	43	37	70	2.85	− 0.2	8	6,857	sw.	29	nw.	24	12	7	11	5.2	T.	....
Reading	325	81	98	29.80	30.17	.....	46.6	.....	70	21	54	28	11	39	33	41	36	71	2.20	.....	7	4,796	nw.	34	nw.	21	10	6	14	6.4	0.3	....
Scranton	805	111	119	29.26	30.14	+ .05	41.9	+ 2.8	72	22	52	27	10	37	36	41	39	85	2.83	+ 0.5	13	5,310	s.	36	se.	9	4	8	18	7.3	0.4	....
Atlantic City	52	37	48	30.11	30.17	+ .07	48.3	+ 2.8	77	20	56	30	1	41	25	43	38	73	2.31	− 0.9	7	5,685	nw.	34	s.	9	12	8	10	4.9	.....	....
Cape May	17	13	49	30.16	30.18	+ .08	49.2	+ 1.8	73	20	56	32	1	43	21	45	43	83	1.32	− 1.9	8	6,277	nw.	36	sw.	9	12	10	8	4.6	.....	....
Trenton	190	159	183	29.94	30.15	.....	46.2	.....	70	20	54	29	11	38	32	41	37	76	2.48	.....	7	8,271	w.	42	se.	9	11	7	12	5.6	T.	....
Baltimore	123	100	113	30.04	30.18	+ .07	49.0	+ 3.2	76	20	57	29	11	41	27	42	37	70	1.82	− 1.1	7	4,389	sw.	26	s.	9	12	8	10	5.3	.....	....
Washington	112	62	85	30.05	30.17	+ .05	47.8	+ 2.8	76	20	57	28	11	38	35	41	37	74	2.20	− 0.5	8	4,322	nw.	30	nw.	24	13	6	11	5.3	.....	....
Lynchburg	681	83	88	29.44	30.20	+ .07	49.9	+ 3.8	80	20	62	23	12	38	39	42	37	72	3.32	+ 0.5	7	4,525	w.	36	n.	24	18	4	8	4.6	T.	....
Mount Weather	1,725	10	75	28.29	30.15	+ .03	44.0	+ 3.6	69	22	51	20	11	37	25	38	32	68	2.25	− 0.6	8	12,728	nw.	57	nw.	25	8	8	14	6.6	T.	....
Norfolk	91	170	205	30.09	30.19	+ .08	52.5	+ 1.3	76	21	61	30	12	44	33	45	39	68	1.30	− 1.4	6	8,394	sw.	42	sw.	9	19	3	8	3.5	.....	....
Richmond	144	11	52	30.04	30.19	+ .07	50.2	+ 1.4	80	20	61	25	11	39	36	42	37	70	1.49	− 0.9	5	4,964	s.	38	sw.	9	18	4	8	4.0	.....	....
Wytheville	2,293	40	47	27.79	30.22	+ .09	45.0	+ 2.0	73	22	56	20	1	34	39	38	34	75	1.52	− 1.5	5	3,998	w.	29	w.	10	15	6	9	4.4	3.3	....
South Atlantic States.							**54.8**	**+ 0.7**								**73**			**73**	**1.36**	**− 1.6**								**3.6**		
Asheville	2,255	70	84	27.84	30.25	+ .11	47.8	+ 2.7	73	19	61	21	11	34	42	40	35	72	0.81	− 2.5	5	4,941	nw.	27	n.	11	17	7	6	3.5	0.1	....
Charlotte	773	68	76	29.36	30.22	+ .09	51.8	+ 1.4	77	23	62	24	11	41	34	43	36	65	3.22	+ 0.4	4	4,279	sw.	24	w.	9	15	9	6	3.9	T.	....
Hatteras	11	12	50	30.17	30.18	+ .07	54.4	− 2.3	69	23	61	37	12	48	24	50	47	81	0.53	− 4.1	3	9,309	n.	48	w.	9	20	7	3	2.7	.....	....
Manteo	12	12	46	.....	.....	.....	52.9	.....	76	23	64	31	13	42	....	....	....	....	1.20	− 3.4	2	.....	ne.	.....	.....	.....	21	7	2	.....	.....	....
Raleigh	376	103	110	29.79	30.20	+ .07	51.9	+ 1.7	76	23	62	25	12	42	36	43	36	63	1.39	− 1.0	5	4,933	ne.	28	w.	9	18	6	6	3.5	.....	....
Wilmington	78	81	91	30.13	30.22	+ .10	54.2	+ 0.1	78	22	65	30	12	43	32	46	43	77	0.65	− 1.8	4	4,455	w.	27	w.	9	20	7	3	2.5	.....	....
Charleston	48	11	92	30.16	30.22	+ .10	57.0	− 1.1	78	23	65	32	11	49	25	51	47	77	1.19	− 1.7	1	6,683	n.	38	w.	9	16	11	3	3.6	.....	....
Columbia, S. C.	351	41	57	29.84	30.23	+ .11	54.6	+ 0.8	78	22	66	26	11	43	37	45	38	64	1.95	− 0.3	2	4,268	w.	31	w.	16	16	9	5	3.4	T.	....
Augusta	180	89	97	30.02	30.22	+ .09	54.4	+ 0.5	76	21	67	28	11	42	38	46	42	76	1.95	− 1.0	4	3,574	nw.	32	w.	9	14	3	13	4.9	.....	....
Savannah	65	150	194	30.15	30.22	+ .10	58.8	+ 1.3	78	23	68	32	11	50	28	51	48	76	1.80	− 0.6	1	6,708	ne.	33	w.	9	17	9	4	3.5	.....	....
Jacksonville	43	96	129	30.14	30.19	+ .09	63.2	+ 1.9	80	24	72	35	11	55	25	57	54	82	0.32	− 1.9	4	6,604	ne.	36	sw.	8	15	8	7	4.1	.....	....
Florida Peninsula.							**69.8**	**+ 0.4**								**78**			**78**	**2.01**	**− 0.2**								**5.6**		
Key West	22	10	64	30.05	30.07	+ .05	73.4	− 0.9	83	8	78	57	11	69	18	68	66	80	1.36	− 1.0	8	9,133	ne.	44	nw.	9	9	11	10	5.3	.....	....
Miami	25	37	72	30.08	30.10	.....	71.4	− 0.6	82	7	76	48	11	66	22	66	63	77	4.39	+ 1.8	17	8,659	ne.	32	ne.	2	6	7	17	6.6	.....	....
Sand Key	23	39	72	30.02	30.05	+ .03	72.8	.....	79	8	75	61	12	70	10	68	66	78	1.34	.....	8	14,052	ne.	47	nw.	9	12	10	8	5.1	.....	....
Tampa	35	79	96	30.11	30.15	+ .07	67.4	+ 2.0	83	7	76	40	10	59	28	60	57	76	0.27	− 1.4	2	6,004	ne.	25	nw.	9	4	17	9	5.8	.....	....
Titusville	44	6	....	30.11	30.16	.....	67.2	+ 1.3	84	21	74	32	10	60	30	....	....	....	0.80	.....	7	.....	e.	....	.....	.....	9	10	11	5.2	.....	....
East Gulf States.							**58.8**	**+ 3.2**								**74**			**74**	**2.10**	**− 1.4**								**4.0**		
Atlanta	1,174	190	216	28.97	30.22	+ .09	54.8	+ 2.9	73	22	63	24	11	46	27	46	38	60	0.54	− 2.9	3	7,903	e.	42	nw.	9	14	10	6	4.2	T.	....
Macon	370	78	87	29.81	30.22	+ .09	54.2	+ 0.9	76	23	67	26	11	42	38	47	43	76	1.14	− 2.0	3	3,453	nw.	25	w.	9	16	7	7	4.0	.....	....
Thomasville	273	8	57	29.90	30.20	+ .08	59.8	+ 1.3	79	21	73	28	11	47	36	51	49	83	0.51	− 2.1	2	3,307	e.	20	nw.	8	16	5	9	4.2	.....	....
Pensacola	56	140	182	30.12	30.18	+ .06	61.6	+ 2.0	77	24	68	38	10	55	22	56	52	78	2.19	− 1.6	3	8,819	ne.	37	nw.	8	14	8	8	3.9	.....	....
Anniston	741	9	57	29.44	30.25	+ .13	54.3	+ 2.4	76	22	67	21	11	41	39	....	....	....	0.95	− 2.4	4	4,011	se.	31	e.	30	17	8	5	3.4	.....	....
Birmingham	700	11	48	29.45	30.23	+ .11	57.8	+ 3.7	76	21	68	26	11	47	31	48	41	64	3.24	− 0.2	5	4,909	se.	32	se.	30	15	12	3	3.9	.....	....
Mobile	57	125	161	30.12	30.18	+ .07	61.4	+ 3.9	80	16	71	38	10	52	27	55	52	79	3.75	0.0	2	5,960	n.	33	se.	29	15	11	4	3.5	.....	....
Montgomery	223	100	112	29.97	30.22	+ .10	58.0	+ 2.3	80	22	70	32	11	46	35	50	44	67	0.87	− 2.3	3	4,149	se.	39	nw.	16	18	8	4	3.3	.....	....
Meridian	375	85	93	29.79	30.20	+ .08	57.7	+ 4.5	78	23	70	28	11	46	36	50	47	78	3.41	− 0.7	2	3,083	e.	24	w.	10	12	7	11	5.1	.....	....
Vicksburg	247	62	74	29.90	30.19	+ .05	62.8	+ 6.9	81	23	73	35	10	53	31	54	49	70	3.86	− 0.3	2	4,770	se.	28	nw.	8	13	15	2	4.2	.....	....
New Orleans	51	90	121	30.11	30.16	+ .06	64.8	+ 4.2	81	21	72	42	10	57	22	59	56	83	2.67	− 1.1	5	5,031	e.	26	n.	8	14	8	8	4.6	.....	....
West Gulf States.							**63.1**	**+ 6.7**								**79**			**79**	**3.20**	**+ 0.1**								**5.7**		
Shreveport	249	77	93	29.88	30.15	+ .04	62.7	+ 7.4	80	22	72	35	10	54	32	56	52	77	2.22	− 1.9	3	5,187	s.	28	w.	29	12	12	6	4.7	.....	....
Bentonville	1,303	11	44	28.74	30.11	.00	54.9	+ 8.2	74	21	63	25	10	47	40	....	....	....	2.46	− 0.5	9	5,028	s.	30	s.	21	6	8	16	6.6	.....	....
Fort Smith	457	79	94	29.63	30.11	.00	58.2	+ 8.3	79	18	66	32	10	51	33	52	47	72	2.15	− 1.1	9	6,158	e.	35	nw.	8	7	3	20	7.0	.....	....
Little Rock	357	139	147	29.78	30.16	+ .04	58.2	+ 6.7	77	21	66	34	10	50	29	52	47	71	3.05	− 1.5	6	5,785	s.	37	nw.	8	9	9	12	5.6	.....	....
Brownsville	57	3	40	.....	.....	.....	71.7	.....	85	4	81	44	10	62	33	....	....	....	0.64	.....	....	.....	se.	.....	.....	.....	.....	.....	.....	.....	.....	....
Corpus Christi	20	69	77	30.07	30.09	+ .02	69.0	+ 5.6	80	7	74	46	10	64	24	65	64	88	2.32	− 0.1	5	8,734	se.	36	se.	20	4	16	10	6.2	.....	....
Fort Worth	670	106	114	29.37	30.08	− .02	62.4	+ 7.3	82	21	69	38	10	56	28	57	54	80	5.90	+ 4.3	13	7,489	s.	36	s.	12	6	8	16	6.3	.....	....
Galveston	54	106	114	30.08	30.14	+ .05	66.4	+ 3.5	76	16	70	47	9	62	18	63	62	90	2.49	− 1.5	5	7,466	se.	36	n.	8	13	12	5	4.2	.....	....
Houston	138	111	121	29.97	30.12	.....	67.3	+ 6.0	82	16	75	43	9	59	26	....	....	....	2.31	.....	5	6,043	se.	31	se.	5	10	13	7	5.1	.....	....
Palestine	510	64	72	29.59	30.12	+ .01	64.4	+ 7.5	81	22	72	41	9	56	29	57	54	77	1.23	− 2.4	7	5,425	s.	24	sw.	29	10	7	13	5.5	.....	....
San Antonio	701	80	91	29.36	30.09	+ .01	66.2	+ 7.0	81	7	75	43	9	58	31	60	56	80	4.55	+ 2.8	8	4,263	se.	26	n.	8	11	7	12	5.5	.....	....
Taylor	583	55	63	29.51	30.12	+ .04	64.3	+ 6.6	81	21	72	41	9	56	32	....	....	....	5.65	+ 3.0	9	5,881	s.	35	w.	29	6	14	10	6.2	.....	....

TABLE I.—*Climatological data for United States Weather Bureau stations, November, 1913*—Continued.

Districts and stations.	Elevation of instruments.			Pressure in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.				Clear days.	Partly cloudy days	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.					Total.	Departure from normal.	Days with 0.01 or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
Ohio Valley and Tennessee.							49.4	+ 4.6											74	3.71	+ 0.2								6.2		
Chattanooga	762	189	213	29.42	30.25	+ .11	52.8	+ 2.5	75	23	64	22	11	42	35		44	39	67	2.41	− 1.2	5	4,612	sw.	32	nw.	9	14	8	8	4.5	0.3	....
Knoxville	996	93	100	29.15	30.23	+ .10	50.3	+ 3.2	72	22	62	22	11	39	36		43	38	71	1.11	− 2.5	5	2,762	ne.	18	w.	10	14	5	11	4.5	0.2	....
Memphis	399	76	97	29.77	30.20	+ .08	57.6	+ 6.2	78	22	66	34	11	49	26		50	45	67	1.64	− 3.0	4	6,051	s.	38	nw.	8	10	7	13	5.6	....	....
Nashville	546	168	191	29.62	30.21	+ .09	53.8	+ 5.1	74	21	64	23	11	44	35		46	40	64	1.84	− 2.0	5	6,221	se.	39	w.	9	10	8	12	5.6	T.	....
Lexington	989	75	102	29.11	30.20	+ .08	49.4	+ 4.7	72	22	57	19	11	42	34					4.00	+ 0.5	10	7,263	s.	37	w.	9	10	4	16	5.9	2.2	....
Louisville	525	219	255	29.60	30.19	+ .07	51.4	+ 5.1	74	22	59	23	11	44	34		45	39	68	4.32	+ 0.1	13	8,406	s.	44	w.	9	6	9	15	6.5	T.	....
Evansville	431	72	82	29.68	30.16	+ .04	52.0	+ 5.7	75	20	59	26	11	45	32		47	43	74	4.87	+ 0.8	14	5,519	s.	29	s.	21	6	11	13	6.6	0.2	....
Indianapolis	822	154	164	29.25	30.15	+ .05	47.6	+ 6.0	73	22	54	20	11	41	34		43	38	75	6.20	+ 2.7	15	7,790	sw.	38	nw.	9	7	3	20	7.2	1.2	....
Terre Haute	575	96	129	29.51	30.13	.....	49.0	.....	74	20	56	20	11	42	32		44	41	79	6.51	.....	13	7,358	s.	37	nw.	9	4	8	18	7.2	T.	....
Cincinnati	628	152	160	29.48	30.18	+ .06	49.6	+ 5.0	76	22	57	22	11	42	36		45	42	81	4.26	+ 1.0	14	4,664	se.	27	w.	9	9	3	18	6.5	0.8	....
Columbus	824	173	222	29.26	30.16	+ .05	45.8	+ 4.4	73	22	54	20	12	38	33		41	38	78	4.56	+ 1.4	15	8,420	sw.	48	nw.	10	8	4	18	6.7	7.5	....
Dayton	899	181	216	29.18	30.15	.....	46.8	+ 4.7	72	22	54	20	11	39	32		43	39	79	3.98	+ 1.1	13	8,436	s.	36	nw.	9	10	4	16	6.3	3.2	....
Pittsburgh	842	353	410	29.23	30.16	+ .06	45.1	+ 2.2	72	21	52	21	10	38	34		40	35	71	2.66	+ 0.1	11	8,055	sw.	40	nw.	24	6	6	18	7.1	14.7	....
Elkins	1,940	41	50	28.11	30.22	+ .10	43.0	+ 3.4	73	22	55	6	12	31	48		37	34	81	5.47	+ 2.6	14	2,145	w.	20	w.	24	10	5	15	6.0	20.5	....
Parkersburg	638	77	84	29.52	30.20	+ .08	46.5	+ 6.9	74	22	56	16	12	37	38		41	38	81	4.62	+ 1.8	11	3,908	s.	28	nw.	24	10	5	15	6.1	15.9	....
Lower Lake Region.							44.1	+ 5.0											77	2.73	− 0.3								7.1		
Buffalo	767	247	280	29.24	30.08	+ .03	43.4	+ 4.1	71	21	49	26	10	38	23		41	38	82	3.43	+ 0.1	16	16,125	sw.	80	sw.	10	3	11	16	7.4	6.2	....
Canton	448	10	61	29.60	30.09	.....	40.0	+ 6.1	66	8	48	18	28	32	33					2.72	− 0.7	14	9,703	sw.	48	sw.	3	7	8	15	6.7	4.0	T.
Oswego	335	76	91	29.70	30.08	+ .03	44.1	+ 5.0	69	22	51	27	27	38	29		39	35	74	2.49	− 0.9	14	9,154	s.	39	sw.	10	2	11	17	7.6	0.5	....
Rochester	523	86	102	29.52	30.10	+ .05	44.4	+ 6.5	72	21	51	27	11	37	31		39	34	72	1.95	− 0.8	13	7,152	w.	37	w.	1	6	4	20	7.6	0.3	....
Syracuse	597	97	113	29.45	30.10	+ .04	43.4	+ 4.7	71	22	51	23	27	36	30		39	34	72	2.03	− 0.7	15	9,756	sw.	48	s.	10	2	9	19	7.5	1.7	....
Erie	714	92	102	29.32	30.10	+ .04	45.7	+ 4.6	73	21	51	25	10	40	28		41	37	76	4.18	+ 0.6	15	9,554	s.	36	nw.	24	3	9	18	7.7	19.3	....
Cleveland	762	190	201	29.28	30.12	+ .05	44.6	+ 4.2	72	22	51	20	12	38	30		40	37	77	3.98	+ 1.2	16	11,097	s.	62	nw.	9	5	6	19	7.3	22.2	....
Sandusky	629	62	70	29.42	30.12	+ .04	45.0	+ 4.2	73	22	52	21	12	38	30		41	38	80	2.25	− 0.5	16	6,692	sw.	53	nw.	10	7	3	20	7.1	8.3	....
Toledo	628	208	246	29.42	30.12	+ .05	45.3	+ 5.6	72	22	52	22	10	39	27		41	37	78	2.55	− 1.0	16	12,449	sw.	52	nw.	9	10	4	16	6.3	6.5	....
Fort Wayne	856	113	124	29.18	30.12	.....	45.2	+ 4.6	70	22	52	23	1	38	31		42	39	82	2.44	.....	15	7,836	sw.	40	nw.	9	9	3	18	6.7	0.7	....
Detroit	730	218	258	29.29	30.10	+ .05	43.6	+ 5.0	69	22	50	19	10	37	31		40	37	81	1.76	− 0.9	13	9,646	sw.	52	nw.	9	8	6	16	6.7	3.6	....
Upper Lake Region.							40.4	+ 6.1											79	2.12	− 0.3								6.3		
Alpena	609	13	92	29.36	30.04	+ .03	38.8	+ 5.1	65	21	45	21	16	32	26		36	33	81	2.85	+ 0.3	11	9,033	nw.	50	nw.	9	2	14	14	7.3	11.2	....
Escanaba	612	54	60	29.35	30.03	.00	38.2	+ 6.5	62	21	44	19	9	32	30		34	30	75	1.54	− 0.7	10	7,637	sw.	37	n.	9	8	4	18	6.8	2.5	....
Grand Haven	632	54	92	29.37	30.06	+ .02	42.9	+ 4.9	65	20	49	23	10	37	22		40	37	82	2.76	+ 0.2	14	10,777	s.	54	nw.	9	6	6	18	6.9	2.4	....
Grand Rapids	707	70	87	29.29	30.08	+ .03	43.8	+ 5.7	70	21	50	22	10	38	24		40	37	81	2.86	+ 0.3	13	5,368	s.	40	nw.	10	7	4	19	7.1	1.0	....
Houghton	684	62	72	29.26	30.00	− .02	37.4	+ 5.9	63	21	44	16	10	31	29					2.90	+ 0.1	10	7,335	w.	38	n.	7	6	7	17	6.9	11.3	....
Lansing	878	11	62	29.12	30.08	.....	41.7	+ 4.9	69	21	49	20	10	34	32		38	36	85	2.38	0.0	16	5,018	sw.	31	nw.	9	6	7	17	6.9	6.2	....
Ludington	637	60	66	29.34	30.05	.....	41.8	.....	63	20	47	24	10	37	28		39	36	80	1.68	.....	9	10,575	s.	50	nw.	9	6	7	17	6.9	3.0	....
Marquette	734	77	111	29.21	30.03	+ .01	38.7	+ 6.8	64	5	45	18	9	32	25		34	30	73	1.33	− 1.5	9	9,406	sw.	46	sw.	25	6	5	19	7.2	8.6	....
Port Huron	638	70	120	29.37	30.08	+ .03	41.5	+ 4.7	65	21	48	20	10	35	27		38	35	82	1.88	− 0.8	15	8,980	sw.	58	n.	9	5	9	16	6.7	7.6	....
Saginaw	641	48	82	29.36	30.07	.....	41.6	.....	69	21	49	20	10	34	29		39	36	82	2.69	+ 0.4	12	8,024	sw.	43	nw.	9	6	6	18	7.1	5.2	....
Sault Ste. Marie	614	11	61	29.32	30.03	+ .02	36.6	+ 5.9	63	21	42	16	10	31	31		34	31	83	2.16	− 0.8	14	7,830	se.	48	w.	23	1	4	25	9.0	3.3	....
Chicago	823	140	310	29.20	30.10	+ .03	47.2	+ 8.0	72	21	53	20	11	41	30		43	38	73	1.47	− 1.0	10	10,468	sw.	42	nw.	9	9	5	16	6.4	T.	....
Green Bay	617	109	144	29.36	30.03	− .01	39.8	+ 7.3	66	21	46	18	11	34	23		35	32	79	1.91	0.0	11	9,333	s.	54	n.	9	6	6	18	7.5	1.8	....
Milwaukee	681	119	133	29.32	30.06	+ .01	43.4	+ 7.3	70	21	50	19	11	37	27		39	34	73	2.17	+ 0.2	8	8,195	sw.	38	n.	9	9	5	16	6.0	T.	....
Duluth	1,133	11	47	28.78	30.03	− .01	35.6	+ 6.3	62	21	43	6	10	28	28		31	28	81	0.74	− 0.8	6	10,611	sw.	62	nw.	7	9	7	14	6.0	T.	....
North Dakota.							34.4	+ 9.9											79	0.16	− 0.6								5.0		
Moorhead	940	8	57	28.99	30.03	− .04	34.6	+10.2	60	17	44	7	14	25	33		31	30	88	0.18	− 0.8	5	5,699	se.	34	nw.	7	12	8	10	4.6	1.6	....
Bismarck	1,674	8	57	28.22	30.05	− .02	35.2	+ 9.2	64	5	46	9	14	24	36		30	26	77	0.16	− 0.5	3	5,479	nw.	35	nw.	7	12	13	5	4.5	2.6	T.
Devils Lake	1,482	11	44	28.36	29.98	+ .08	32.6	+10.0	59	5	41	10	14	24	32		28	25	79	0.17	− 0.5	4	7,418	s.	30	n.	7	10	12	8	5.1	....	....
Williston	1,872	40	47	27.94	29.97	− .09	35.4	+10.2	62	16	46	15	14	25	32		29	25	72	0.15	− 0.4	4	4,425	sw.	28	ne.	21	11	7	12	5.7	0.4	....
Upper Mississippi Valley.							46.6	+ 8.9											75	2.02	0.0								6.2		
Minneapolis	918	102	208	.....	.....	.....	40.2	.....	64	21	47	13	10	33	25		.....	.....	.....	0.48	− 0.7	9	8,820	s.	50	nw.	7	10	9	11	5.5	0.6	....
St. Paul	837	201	236	29.11	30.03	− .03	40.0	+ 9.1	64	21	48	14	10	32	28		36	31	74	0.56	− 0.7	8	9,249	s.	52	n.	7	7	9	14	6.1	0.3	....
La Crosse	714	11	48	29.27	30.06	− .01	41.6	+ 7.8	65	21	50	16	10	34	28		.....	.....	.....	1.93	+ 0.4	9	4,259	s.	27	sw.	21	6	8	16	6.6	T.	....
Madison	974	70	78	29.01	30.08	+ .02	41.9	+ 7.7	67	21	49	18	11	35	28		38	34	78	1.73	− 0.1	8	8,084	sw.	43	sw.	21	8	8	14	6.6	T.	....
Charles City	1,015	10	49	28.96	30.06	− .02	41.6	+ 8.6	66	20	50	15	10	33	31		38	34	81	1.01	− 0.4	9	5,490	s.	30	sw.	6	8	10	12	6.0	0.4	....
Davenport	606	71	79	29.41	30.08	.00	46.4	+ 8.9	73	20	54	20	10	38	32		42	39	79	1.26	− 0.5	9	5,594	sw.	29	sw.	21	9	5	16	6.2	T.	....
Des Moines	861	84	97	29.14	30.06	− .02	46.6	+ 9.8	73	20	55	20	11	38	31		42	36	72	1.03	− 0.4	10	6,098	sw.	37	sw.	21	8	8	14	6.3	.....	....
Dubuque	698	81	96	29.32	30.09	+ .02	44.2	+ 8.2	70	20	52	19	10	36	27		40	35	73	1.23	− 0.6	8	4,769	s.	30	n.	9	8	7	15	6.5	T.	....
Keokuk	614	64	78	29.42	30.10	+ .01	49.4	+10.0	74	20	58	20	11	41	33		44	39	73	2.22	+ 0.4	11	6,106	s.	36	sw.	21	8	8	14	6.2	.....	....
Cairo	356	87	93	29.76	30.15	+ .03	54.1	+ 7.2	77	22	62	27	11	46	32		48	42	70	3.14	− 0.9	10	6,370	s.	35	sw.	7	8	5	17	6.7	.....	....
Peoria	609	11	45	29.44	30.12	+ .03	47.2	+ 9.7	74	21	55	16	11	39	33		42	39	81	2.77	+ 0.1	14	5,637	s.	29	sw.	21	12	5	13	5.5	T.	....
Springfield, Ill.	644	10	91	29.41	30.11	+ .01	49.2	+ 8.5	75	21	57	23	11	42	32		44	40	76	4.49	+ 1.8	13	6,679	s.	30	nw.	8	9	7	14	6.3	T.	....
Hannibal	534	74	109	29.52	30.11	+ .02	50.6	+10.1	76	21	59	21	11	42	30		.....	.....	.....	3.24	+ 1.3	9	7,088	sw.	37	sw.	21	9	8	13	5.9	T.	....
St. Louis	567	265	303	29.50	30.12	+ .02	52.4	+ 9.0	75	21	60	28	9	45	33		47	42	72	3.12	+ 0.2	10	10,769	s.	42	s.	20	9	5	16	6.4	.....	....
Missouri Valley.							46.6	+ 9.1											72	1.28	0.0								5.9		
Columbia, Mo.	784	11	84	29.26	30.10	+ .01	51.7	+ 9.3	77	21	60	21	11	44	37		.....	.....	.....	3.24	+ 0.9	10	6,463	s.	33	nw.	7	6	7	17	6.9	.....	....
Kansas City	963	161	181	29.04	30.08	− .01	51.5	+ 9.1	74	19	58	28	10	45	31		47	43	75	1.80	0.0	7	8,832	s.	50	nw.	7	7	9	14	6.3	.....	....
St. Joseph	967	11	49	29.02	30.08	.....	50.0	.....	74	20	58	26	10	42	31		45	41	76	1.46	.....	7	6,421	s.	35	nw.	7	7	10	13	6.1	.....	....
Springfield, Mo.	1,324	98	104	28.70	30.12	+ .02	53.0	+ 8.6	75	21	60	25	10	45	30		47	43	72	1.59	− 1.0	7	8,234	s.	35	nw.	8	8	7	15	6.1	T.	....
Iola	984	11	50	29.04	30.10	+ .01	52.4	+ 9.4	77	19	61	25	10	44	37		.....	.....	.....	1.67	+ 0.3	10	5,754	s.	29	sw.	20	7	8	15	6.2	.....	....
Topeka	983	85	101	.....	.....	.....	50.0	+ 8.3	74	20	58	25	10	42	35		.....	.....	.....	1.31	0.0	6	7,327	s.	42	nw.	7	5	10	15	6.4	.....	....
Lincoln	1,189	11	84	28.78	30.06	− .02	46.4	+ 8.4	72	20	56	19	10	37	39		41	37	75	2.43	+ 1.6	7	7,337	s.	45	nw.	7	11	8	11	5.6	.....	....
Omaha	1,105	115	121	28.87	30.07	− .01	46.4	+ 8.7	72	20	54	22	10	38	30		41	36	72	1.15	+ 0.1	8	5,749	s.	42	n.	7	4	14	12	6.7	.....	....
Valentine	2,598	47	54	27.29	30.05	− .03	42.1	+ 8.4	75	11	56	16	4	29	46		34	27	64	0.45	− 0.3	5	6,000	sw.	38	nw.	6	16	8	6	4.2	T.	....
Sioux City	1,135	94	164	28.83	30.06	− .02	43.2	+ 8.9	69	20	51	19	10	35	28		39	34	76	0.61	− 0.4	7	8,584	s.	54	nw	7	5	12	13	6.5	0.9	....
Huron	1,306	56	67	28.63	30.06	− .02	39.6	+12.2	68	6	51	14	10	28	40		33	28	63	0.14	− 0.4	2	6,696	s.	34	n.	7	10	12	8	5.2	0.7	....
Pierre	1,572	70	75	28.36	30.06	− .02	40.6	+ 9.0	71	20	52	16	10	30	41		33	26	63	0.11	− 0.3	3	5,156	e.	39	nw.	21	13	10	7	4.2	0.4	....
Yankton	1,233	49	57	28.70	30.04	− .04	42.3	+ 8.8	69	17	52	17	10	33	34		.....	.....	.....	0.80	0.0	7	5,117	nw.	28	nw.	7	4	13	13	6.4	1.3	....

TABLE I.—*Climatological data for United States Weather Bureau stations, November, 1913*—Continued.

Districts and stations.	Elevation of instruments.			Pressure in inches.			Temperature of the air, in degrees Fahrenheit.												Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.						Total.	Departure from normal.	Days with 0.01 or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
Northern Slope.							**37.4**	**+ 5.5**													**70**	**0.58**	**− 0.2**									**5.6**		
Havre	2,505	11	44	27.25	29.93	− .10	34.7	+ 4.1	59	16	45	8	13	24	40	32	28	81	0.83	+ 0.1	9	5,301	sw.	48	w.	15	5	7	18	7.4	3.2	....
Helena	4,110	87	114	25.74	30.00	− .10	38.0	+ 5.3	59	16	46	20	21	30	28	31	25	64	0.52	− 0.2	4	5,065	sw.	53	sw.	6	7	10	13	6.2	T.	....
Kalispell	2,962	11	34	26.88	29.99	− .08	35.4	+ 3.4	58	16	42	15	21	28	24	33	30	83	1.16	− 0.7	13	2,496	nw.	19	sw.	16	4	6	20	7.6	1.4	....
Miles City	2,371	26	48	27.42	30.02	− .05	40.2	+ 0.3	64	16	52	20	27	29	34	34	30	77	0.04	− 0.6	2	2,891	se.	32	nw.	7	12	16	2	3.7	....	....
Rapid City	3,234	46	50	26.58	30.05	− .03	41.5	+ 7.9	69	24	54	17	4	29	43	33	26	63	0.13	− 0.3	2	4,265	w.	26	n.	2	14	9	7	4.2	0.3	....
Cheyenne	6,088	58	64	24.00	30.06	− .01	39.1	+ 4.2	66	10	50	15	30	28	37	32	25	63	0.37	0.0	6	8,509	w.	50	nw.	6	11	8	11	5.1	2.5	0.3
Lander	5,372	60	68	24.64	30.11	+ .01	33.9	+ 5.2	62	1	47	10	29	21	39	27	19	58	0.51	− 0.1	4	3,147	sw.	35	sw.	11	11	10	9	5.1	3.6	T.
Sheridan	3,790	10	47	26.07	30.05	.....	36.8	.....	65	16	52	13	29	22	41	29	24	72	0.22	.....	3	3,167	se.	38	nw.	6	11	10	9	4.8	0.4	....
Yellowstone Park	6,200	11	48	23.86	30.09	− .02	31.6	+ 2.3	54	9	40	9	22	24	28	28	23	71	1.54	+ 0.1	13	6,428	s.	38	sw.	20	6	7	17	6.9	3.5	T.
North Platte	2,821	11	51	27.11	30.09	+ .01	42.6	+ 7.5	75	11	57	14	23	28	54	34	28	67	0.14	− 0.3	4	4,307	w.	34	n.	7	12	7	11	5.1	T.	....
Middle Slope.							**48.4**	**+ 6.6**													**70**	**1.66**	**+ 0.7**									**5.3**		
Denver	5,291	129	172	24.73	30.04	− .02	43.8	+ 4.6	75	11	57	17	30	31	40	35	25	53	0.38	− 0.1	3	4,818	s.	32	nw.	6	20	8	2	3.2	2.8	0.2
Pueblo	4,685	80	86	25.30	30.05	.00	42.8	+ 3.5	76	10	58	13	23	28	51	33	25	56	0.11	− 0.3	1	3,322	nw.	31	nw.	20	16	8	6	4.0	1.0	....
Concordia	1,398	42	50	28.58	30.07	− .01	48.7	+ 8.8	74	18	59	22	10	39	40	43	39	76	1.90	+ 1.0	8	4,967	s.	30	nw.	7	7	9	14	6.6	0.2	....
Dodge City	2,509	11	51	27.42	30.05	− .02	48.0	+ 7.5	79	11	59	26	23	37	43	41	38	78	2.14	+ 1.6	6	7,351	s.	38	n.	29	14	5	11	4.8	.....	....
Wichita	1,358	139	158	28.60	30.04	− .04	51.2	+ 7.4	72	19	58	26	10	44	33	47	43	76	1.73	+ 0.6	10	9,078	s.	44	sw.	6	6	6	18	6.6	.....	....
Oklahoma	1,214	10	47	28.79	30.08	.00	55.8	+ 7.9	76	13	63	32	10	49	29	51	48	81	3.71	+ 1.5	14	10,514	s.	46	s.	20	6	7	17	6.7	.....	....
Southern Slope.							**55.8**	**+ 4.8**													**74**	**3.33**	**+ 2.0**									**5.6**		
Abilene	1,738	10	52	28.27	30.08	+ .01	58.7	+ 6.1	78	19	67	37	9	51	32	53	50	79	5.82	+ 4.6	10	7,100	s.	38	s.	20	7	6	17	6.7	.....	....
Amarillo	3,676	10	49	26.30	30.05	.00	50.3	+ 6.5	79	19	61	32	8	40	40	43	39	75	1.98	+ 0.8	6	8,558	sw.	40	sw.	20	18	6	6	4.1	.....	....
Del Rio	944	8	57	29.08	30.06	+ .01	63.4	+ 4.1	80	16	72	35	9	55	40	.....	.....	.....	4.54	+ 2.8	11	5,472	se.	32	nw.	18	7	8	15	6.7	.....	....
Roswell	3,566	75	85	26.41	30.04	+ .01	50.8	+ 2.7	78	6	63	26	5	39	48	44	38	69	0.97	− 0.2	7	4,693	s.	36	w.	20	11	9	10	5.1	.....	....
Southern Plateau.							**53.6**	**+ 1.8**													**63**	**0.93**	**+ 0.4**									**4.1**		
El Paso	3,762	110	133	26.23	30.01	+ .01	54.8	+ 3.9	77	7	66	32	30	44	33	45	37	57	0.97	+ 0.4	4	7,140	nw.	50	nw.	20	18	8	4	3.4	.....	....
Santa Fe	7,013	57	62	23.28	30.06	+ .03	42.4	+ 4.2	63	10	52	26	21	33	27	35	30	70	1.75	+ 1.0	7	4,558	n.	32	se.	3	11	14	5	4.7	2.0	....
Flagstaff	6,907	8	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phoenix	1,108	76	81	28.80	29.96	− .02	61.6	+ 2.9	86	8	72	41	29	51	35	53	45	62	0.83	− 0.1	8	3,157	e.	26	w.	19	15	3	12	5.0	.....	....
Yuma	141	9	58	29.81	29.96	− .02	63.6	+ 1.7	91	9	76	41	29	51	39	53	45	58	0.15	− 0.2	1	3,369	n.	25	n.	22	25	3	2	1.8	.....	....
Independence	3,910	11	42	26.04	30.07	+ .02	45.5	− 3.7	76	7	57	24	23	34	36	39	35	76	0.95	+ 0.7	6	3,311	s.	34	se.	11	8	11	11	5.4	.....	....
Middle Plateau.							**41.3**	**+ 2.1**													**70**	**1.56**	**+ 0.6**									**5.3**		
Reno	4,532	74	81	25.46	30.05	− .06	42.0	+ 1.0	73	9	53	20	22	31	38	36	30	68	1.51	+ 0.4	10	3,864	w.	36	w.	20	10	6	14	5.8	0.3	....
Tonopah	6,090	12	20	24.06	30.04	.....	40.3	.....	65	8	47	18	22	33	22	34	26	59	0.80	− 0.1	6	6,812	se.	37	nw.	30	10	14	6	4.6	3.0	2.0
Winnemucca	4,344	18	56	25.63	30.07	− .07	39.0	+ 1.5	70	9	50	15	22	28	39	34	31	78	1.37	+ 0.6	10	4,091	ne.	29	s.	10	12	8	10	5.1	1.7	1.0
Modena	5,479	10	43	24.63	30.04	− .04	39.2	+ 0.2	66	9	49	15	23	29	41	34	29	73	1.54	+ 0.9	10	6,147	sw.	45	w.	13	10	10	10	5.2	T.	T.
Salt Lake City	4,360	147	189	25.65	30.06	− .06	44.0	+ 3.6	68	10	52	21	22	36	31	38	33	69	1.21	− 0.2	13	4,603	se.	30	sw.	11	11	9	10	4.9	1.0	....
Durango	6,546	18	56	23.69	30.08	+ .02	40.0	+ 2.8	65	7	51	20	29	30	37	34	30	75	3.36	+ 2.2	13	3,273	ne.	27	n.	20	10	6	14	6.0	1.0	....
Grand Junction	4,602	43	51	25.43	30.05	− .03	43.6	+ 3.7	67	1	53	24	22	34	36	38	32	70	1.15	+ 0.6	9	2,423	se.	16	nw.	21	9	6	15	5.8	1.0	....
Northern Plateau.							**42.0**	**+ 3.4**													**72**	**1.91**	**+ 0.6**									**7.6**		
Baker	3,471	48	53	26.45	30.08	− .08	37.6	+ 2.7	56	9	44	22	13	31	27	34	30	74	0.64	− 0.5	9	4,544	se.	23	se.	27	3	11	16	7.0	2.6	....
Boise	2,739	78	86	27.20	30.09	− .08	43.5	+ 3.9	67	9	51	26	14	36	29	38	33	69	2.82	+ 2.0	15	3,717	se.	25	se.	29	6	8	16	7.0	1.8	....
Lewiston	757	40	48	29.20	30.02	− .10	43.6	+ 2.7	60	8	50	29	13	37	23	.....	.....	.....	1.50	+ 0.2	13	2,467	e.	25	w.	6	3	6	21	8.0	0.2	....
Pocatello	4,477	46	54	25.50	30.07	− .07	40.7	+ 4.4	64	1	49	21	24	32	34	35	30	70	2.01	+ 1.5	12	6,160	se.	36	sw.	20	6	10	14	6.4	1.5	T.
Spokane	1,929	101	110	27.93	30.01	− .09	40.6	+ 3.3	56	16	46	28	12	35	21	38	34	77	2.58	+ 0.3	18	4,583	s.	30	w.	6	1	5	24	8.7	1.4	....
Walla Walla	1,000	107	115	28.94	30.02	− .11	46.0	+ 3.1	62	16	52	34	15	40	21	41	35	69	1.91	− 0.2	18	6,049	sw.	40	sw.	27	0	9	21	8.4	T.	....
No. Pac. Coast Region.							**45.9**	**+ 0.8**													**88**	**7.53**	**+ 0.2**									**8.1**		
North Head	211	11	56	29.69	29.92	− .13	47.6	− 0.1	62	8	51	36	13	44	13	46	45	90	8.09	+ 1.8	23	16,187	se.	84	s.	29	6	2	22	7.8	.....	.....
Port Crescent	259	8	53	29.60	29.89	− .11	41.7	− 0.6	59	15	48	28	13	35	21	.....	.....	.....	9.05	+ 1.6	23	3,953	se.	23	ne.	7	0	9	21	8.3	.....	.....
Seattle	125	215	250	29.82	29.95	− .09	46.2	+ 1.7	62	3	51	35	14	41	18	45	43	91	4.74	− 1.1	19	7,880	s.	49	s.	29	0	5	25	8.6	.....	.....
Tacoma	213	113	120	29.72	29.95	− .09	45.3	+ 1.2	59	26	51	32	3	40	23	44	43	91	5.59	− 2.9	20	4,715	sw.	34	sw.	29	0	4	26	8.7	.....	.....
Tatoosh Island	86	7	57	29.76	29.85	− .12	45.8	− 0.1	58	8	50	36	20	42	14	44	42	89	15.06	+ 3.0	24	14,912	e.	64	s.	23	2	12	16	7.4	T.	....
Portland, Oreg	153	68	106	29.81	29.97	− .13	47.5	+ 1.9	60	2	52	34	14	43	21	44	41	82	5.39	− 1.1	20	5,090	s.	30	sw.	29	3	7	20	8.1	.....	.....
Roseburg	510	9	57	29.46	30.01	− .11	47.4	+ 1.8	62	23	52	36	18	42	19	45	43	85	4.79	+ 0.4	17	2,071	s.	21	se.	25	0	12	18	8.0	.....	.....
Mid. Pac. Coast Region.							**52.4**	**− 0.7**													**83**	**5.35**	**+ 2.2**									**6.3**		
Eureka	62	73	89	29.98	30.05	− .06	50.8	− 0.2	68	3	56	38	30	45	20	49	47	89	5.29	− 0.4	15	4,535	sw.	34	se.	28	2	8	20	8.0	.....	.....
Mount Tamalpais	2,375	11	18	27.56	30.05	− .04	47.7	− 2.9	70	8	52	36	30	44	15	44	42	84	6.57	+ 2.9	17	13,864	nw.	66	n.	30	9	3	18	6.3	.....	.....
Point Reyes Light	490	7	18	29.48	30.00	.....	52.8	− 0.2	70	8	56	45	29	50	17	.....	.....	.....	4.59	.....	18	14,421	nw.	70	nw.	29	7	7	16	6.6	.....	.....
Red Bluff	332	50	56	29.68	30.05	− .06	52.4	− 1.0	78	7	59	33	23	46	26	48	45	79	5.34	+ 2.2	13	3,703	se.	31	n.	30	8	5	17	6.5	.....	.....
Sacramento	69	106	117	29.98	30.05	− .04	53.6	+ 0.2	72	6	60	36	23	47	21	50	46	78	4.58	+ 2.4	12	4,765	se.	32	nw.	30	11	9	10	5.0	.....	.....
San Francisco	155	200	204	29.88	30.04	− .05	55.2	− 0.3	72	7	60	46	24	51	18	52	50	84	6.22	+ 3.8	15	4,609	w.	28	se.	18	9	6	15	5.8	.....	.....
San Jose	141	12	110	29.91	30.06	.....	54.2	− 0.2	78	7	62	32	24	46	31	.....	.....	.....	4.10	+ 2.2	15	4,032	se.	30	w.	29	6	10	14	6.2	.....	.....
So. Pac. Coast Region.							**58.6**	**+ 1.6**													**75**	**2.76**	**+ 1.5**									**4.6**		
Fresno	327	89	98	29.70	30.06	.00	55.2	+ 0.6	79	8	64	34	23	47	29	51	47	79	1.86	+ 0.8	8	3,918	nw.	29	nw.	29	5	16	9	6.1	.....	.....
Los Angeles	338	159	191	29.65	30.02	.00	61.8	+ 3.4	92	8	70	45	30	53	31	53	48	70	3.00	+ 1.5	7	4,339	ne.	24	nw.	30	15	6	9	3.9	.....	.....
San Diego	87	62	70	29.90	29.99	− .03	60.8	+ 1.8	82	9	68	48	23	54	24	55	52	78	2.23	+ 1.4	8	4,152	nw.	30	s.	12	20	5	5	3.2	.....	.....
San Luis Obispo	201	47	54	29.84	30.05	− .01	56.7	+ 0.4	86	8	65	36	24	48	36	51	47	73	3.97	+ 2.3	10	3,909	n.	27	ne.	22	9	9	12	5.4	.....	.....
West Indies.																																		
San Juan	82	8	54	29.87	29.95	+ .05	77.3	.....	87	9	82	66	30	73	14	.....	.....	.....	3.51	− 3.4	23	9,813	ne.	40	ne.	15	7	18	5	4.6	.....	.....
Panama.																																		
Ancon	92	6	69	29.71	29.80	.....	79.0	.....	91	7	86	70	14	72	20	75	74	92	10.63	+ 0.2	27	3,009	nw.	25	n.	21	2	24	4	5.9	.....	.....
Culebra	404	5	62	29.40	29.81	.....	78.2	.....	89	7	84	70	5	72	18	74	74	96	11.21	− 1.0	26	4,192	nw.	40	ne.	19	0	1	29	9.2	.....	.....
Colon	10	5	71	29.82	29.83	.....	79.2	.....	88	16	83	72	14	76	12	76	75	90	16.75	− 5.0	26	6,515	ne.	36	n.	14	0	9	21	8.2	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during November, 1913, at all stations furnished with self-registering gages.*

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex	28			0.56														.53			
Albany, N. Y	9			0.43														.21			
Alpena, Mich	9–10			0.97														*			
Amarillo, Tex	29–30			0.98														*			
Anniston, Ala	8			0.29														.20			
Asheville, N. C	8			0.39														.19			
Atlanta, Ga	8			0.23														.19			
Atlantic City, N. J	9			0.73														.47			
Augusta, Ga	8			1.90														.54			
Baker, Oreg	6			0.08														.07			
Baltimore, Md	16			0.84														.19			
Bentonville, Ark	27			1.17														.33			
Binghamton, N. Y	9			1.68														.47			
Birmingham, Ala	30	5.30 p. m.	D. N. p.m.	1.89	8.17 p. m.	8.29 p. m.	.40	.21	.47	.51											
					10.24 p.m.	11.15 p. m.	1.08	.06	.10	.22	.28	.30	.37	.55	.59	.71	.74	.81			
Bismarck, N. Dak	22			0.13														*			
Block Island, R. I	29			0.99														.43			
Boise, Idaho	5			0.80														.12			
Boston, Mass	9			0.43														.29			
Buffalo, N. Y	9			1.06														.20			
Burlington, Vt	9			0.28														.28			
Cairo, Ill	30			0.63														.28			
Canton, N. Y	9			0.95														.38			
Charles City, Iowa	21			0.40														*			
Charleston, S. C	8–9	6.52 p. m.	D. N. a.m.	1.19	7.50 p. m.	8.21 p. m.	.03	.07	.11	.17	.34	.55	.67	.71							
Charlotte, N. C	8			2.79														.47†			
Chattanooga, Tenn	30			1.79														.54			
Cheyenne, Wyo	28			0.13														*			
Chicago, Ill	30			0.53														.20			
Cincinnati, Ohio	15			1.24														.23			
Cleveland, Ohio	9			1.48														.17†			
Columbia, Mo	22			0.59														.47			
Columbia, S. C	8			1.83														.51			
Columbus, Ohio	13			0.61														.23			
Concord, N. H	9			0.63														.22			
Concordia, Kans	20			0.50														.48			
Corpus Christi, Tex	27	7.02 a. m.	10.25 a. m.	1.76	8.39 a. m.	9.22 a. m.	.22	.15	.37	.70	.87	1.10	1.22	1.28	1.37	1.43					
Davenport, Iowa	30			1.02														.32			
Dayton, Ohio	14			0.58														.23			
Del Rio, Tex	18	12.05 a. m.	5.10 a. m.	1.74	1.07 a. m.	2.14 a. m.	.04	.16	.20	.22	.29	.42	.47	.50	.51	.56	.62	.92	1.05		
Denver, Colo	2–3			0.23														*			
Des Moines, Iowa	30			0.45														.22			
Detroit, Mich	7–8			0.35														.27			
Devils Lake, N. Dak	18			0.14														*			
Dodge City, Kans	29			1.51														*			
Dubuque, Iowa	18			0.23														.22			
Duluth, Minn	21			0.38														*			
Durango, Colo	2–3			1.11														*			
Eastport, Me	20			0.43														.10			
Elkins, W. Va	14			0.68														.22			
El Paso, Tex	17			0.68														.35			
Erie, Pa	9			1.59														.21			
Escanaba, Mich	29			0.45														*			
Eureka, Cal	26			0.74														.29			
Evansville, Ind	14			1.48														*			
Flagstaff, Ariz	19			0.39														*			
Fort Smith, Ark	27			0.37														.28			
Fort Wayne, Ind	30			0.70														.18			
Fort Worth, Tex	22–23	5.20 p. m.	2.00 p. m.	3.44	6.54 p. m.	8.11 p. m.	.21	.07	.10	.17	.26	.34	.42	.52	.66	.76	.89	.96	1.22		
Fresno, Cal	18			0.68														.23			
Galveston, Tex	29	11.23 a. m.	3.40 p. m.	1.64	11.58 a. m.	1.08 p. m.	.01	.08	.24	.35	.43	.49	.55	.59	.66	.81	.93	1.07	1.33		
Grand Haven, Mich	18			0.77														.36			
Grand Junction, Colo	13			0.32														.16			
Grand Rapids, Mich	18–19	7.45 a. m.	8.30 a. m.	1.85	10.40 p. m.	11.37 p. m.	.17	.18	.31	.40	.46	.56	.60	.66	.76	.81	.87	1.07			
Green Bay, Wis	18–19			1.06														*			
Hannibal, Mo	14			1.37														.32			
Harrisburg, Pa	9			0.73														.37			
Hartford, Conn	9			0.57														.23			
Hatteras, N. C	17			0.20														.15			
Havre, Mont	6–7			0.23														*			
Helena, Mont	1–2			0.38														*			
Houghton, Mich	7–8			1.38														*			
Houston, Tex	29	9.14 a. m.	12.15 p. m.	1.28	9.30 a. m.	10.22 a. m.	.03	.08	.15	.28	.44	.55	.63	.77	.82	.89	.98	1.05			
Huron, S. Dak	14			0.09														*			
Independence, Cal	18–19			0.90														*			
Indianapolis, Ind	22			0.72														.64			
Iola, Kans	22			0.70														.35			
Jacksonville, Fla	8			0.26														.17			
Kalispell, Mont	10–11			0.27														*			
Kansas City, Mo	30			0.70														.26			
Keokuk, Iowa	22			0.76														*			
Key West, Fla	3			0.66														.34			
Knoxville, Tenn	30			0.41														.22			
La Crosse, Wis	21			0.59														.29			
Lander, Wyo	2			0.30														*			
Lansing, Mich	18–19			0.59														*			
Lewiston, Idaho	5			0.32														.11			
Lexington, Ky	13			0.42														.28			
Lincoln, Nebr	28			0.39														.35			
Little Rock, Ark	27			0.97														.53			
Los Angeles, Cal	12	2.09 p. m.	3.05 p. m.	0.82	2.23 p. m.	2.58 p. m.	.08	.06	.28	.46	.56	.61	.65	.74							
	18	6.10 p. m.	11.20 p. m.	1.45	7.44 p. m.	8.13 p. m.	.32	.06	.16	.23	.31	.54	.66								
Louisville, Ky	7			0.76														.35			
Ludington, Mich	18–19			0.85														*			
Lynchburg, Va	9			1.16														.38			
Macon, Ga	8			1.04														.48			
Madison, Wis	30			0.46														.21			
Marquette, Mich	22			0.18														.09			
Memphis, Tenn	28			0.82														.26			

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during November, 1913, at all stations furnished with self-registering gages*—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Meridian, Miss	29			2.99														.65			
Miami, Fla	8			0.60														.43			
Milwaukee, Wis	18			0.95														.35			
Minneapolis, Minn	21			0.14														*			
Mobile, Ala	29-30	D. N. a. m.	D. N. a. m.	3.75	11.17 p. m.	11.52 p. m.	2.75	.13	.18	.18	.19	.33	.55	.67							
Modena, Utah	2			0.51														.16			
Montgomery, Ala	30			0.78														.27			
Moorhead, Minn	22			0.08														*			
Mount Tamalpais, Cal	18			2.09														.43			
Mount Weather, Va	9			0.88														.19			
Nantucket, Mass	29			0.76														.12			
Nashville, Tenn	7			0.89														.40			
New Haven, Conn	9			0.70														.30			
New Orleans, La	28	5.10 p. m.	9.20 p. m.	1.39	6.55 p. m.	7.54 p. m.	.29	.05	.13	.34	.41	.43	.44	.48	.54	.65	.79	1.10			
New York, N. Y	9			0.46														.23			
Norfolk, Va	9,16			0.56														.24			
Northfield, Vt	8-9			0.72														*			
North Head, Wash	4			0.91														.26			
North Platte, Nebr	30			0.10														.02			
Oklahoma, Okla	20			0.44														.44			
Omaha, Nebr	29			0.23														.21			
Oswego, N. Y	8-9			1.09														*			
Palestine, Tex	29			0.62														.28			
Parkersburg, W. Va	16			0.54														.19			
Pensacola, Fla	29			1.08														.35			
Peoria, Ill	22			0.40														.26			
Philadelphia, Pa	9			0.61														.22			
Phoenix, Ariz	19			0.46														.23			
Pierre, S. Dak	6-7			0.07														*			
Pittsburgh, Pa	14			0.32														.10			
Pocatello, Idaho	6			0.42														.25			
Point Reyes Light, Cal	18			0.99														.30			
Port Huron, Mich	7			0.25														.20			
Portland, Me	9			0.30														.11			
Portland, Oreg	5			0.91														.20			
Providence, R. I	9			0.41														.16			
Pueblo, Colo	3			0.11														*			
Raleigh, N. C	8-9			1.04														.43			
Rapid City, S. Dak	6			0.10														*			
Reading, Pa	9			0.94														.45†			
Red Bluff, Cal	18			1.87														.20			
Reno, Nev	11			0.43														.19			
Richmond, Va	9			0.50														.22			
Rochester, N. Y	10			0.51														.22			
Roseburg, Oreg	28			0.39														.22			
Roswell, N. Mex	17			0.72														.24			
Sacramento, Cal	18			1.61														.27			
Saginaw, Mich	19			1.16														.36			
St. Joseph, Mo	30			1.03														.25			
St. Louis, Mo	14			1.64														.35			
St. Paul, Minn	21			0.20														*			
Salt Lake City, Utah	27			0.28														.15			
San Antonio, Tex	29	3.15 a. m.	5.40 a. m.	0.89	3.44 a. m.	4.09 a. m.	.02	.06	.19	.43	.65	.71									
San Diego, Cal	18			0.50														.48			
Sand Key, Fla	2			0.91														.41			
Sandusky, Ohio	9-10			0.80														*			
San Francisco, Cal	18			2.21														.40			
San Jose, Cal	18			1.58														.39			
San Luis Obispo, Cal	18			1.01														.37			
Santa Fe, N. Mex	3			0.58														*			
Sault Ste. Marie, Mich	7-8			0.76														*			
Savannah, Ga	8	5.05 p. m.	10.30 p. m.	1.80	5.16 p. m.	6.15 p. m.	.04	.33	.57	.66	.77	.88†	.95†	1.02†	1.09†	1.17†	1.25†	1.37†			
Scranton, Pa	9			1.52														.40			
Seattle, Wash	25			0.47														.14			
Sheridan, Wyo	2			0.10														*			
Shreveport, La	28			0.84														.52			
Sioux City, Iowa	20-21			0.28														*			
Spokane, Wash	5			0.82														.09			
Springfield, Ill	27-28	D. N. p. m.	D. N. a. m.	0.76	12.53 a. m.	1.12 a. m.	.16	.06	.16	.43	.56										
Springfield, Mo	22			0.70														*			
Syracuse, N. Y	9			1.03														*			
Tacoma, Wash	5			1.00														.23			
Tampa, Fla	7-8			0.27														.09			
Tatoosh Island, Wash	23			2.14														.47			
Taylor, Tex	4	11.54 a. m.	D. N. p. m.	2.83	12.29 p. m.	2.10 p. m.	.02	.07	.31	.55	.67	.75	.80	.83	.95	.98	1.01	1.27	1.76	2.04	2.13
	29	3.55 a. m.	7.10 a. m.	0.84	4.00 a. m.	4.25 a. m.	.01	.18	.28	.39	.50	.57									
Terre Haute, Ind	22			0.95														.77			
Thomasville, Ga	8			0.36														.15			
Toledo, Ohio	7			0.42														.32			
Tonopah, Nev	12			0.40														.22			
Topeka, Kans	20			0.28														.28			
Valentine, Nebr	6			0.23														.19			
Vicksburg, Miss	28	2.47 p. m.	9.50 p. m.	3.17	5.41 p. m.	6.37 p. m.	.63	.12	.18	.22	.27	.40	.60	.69	.92	1.02	1.19	1.41			
Walla Walla, Wash	5			0.42														.10			
Washington, D. C	9			0.76														.37			
Wichita, Kans	20			0.24														.24			
Williston, N. Dak	2			0.07														.04			
Wilmington, N. C	8-9			0.63														.38			
Winnemucca, Nev	11			0.25														.09			
Wytheville, Va	16			0.41														.19			
Yankton, S. Dak	21			0.31														.31			
Yellowstone Park, Wyo	11			0.53														*			

*Self-register not working. †Record partly estimated. ‡No precipitation occurred during month.

TABLE III.—*Data furnished by the Canadian Meteorological Service, November, 1913.*

Districts and stations.	Pressure.			Temperature.						Precipitation.		
	Station reduced to mean of 24 hours.	Sea level reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Snowfall.
	Inches.	*Inches.*	*Inches.*	*°F.*	*°F.*	*°F.*	*°F.*	*°F.*	*°F.*	*Inches.*	*Inches.*	*Inches.*
St. Johns, N. F.	29.73	29.87	−.07	36.0	− 6.5	42.1	29.9	58	15	2.38	−3.19	4.5
Sydney, C. B. I.	29.98	30.02	+.07	39.2	+ 2.1	46.4	32.0	62	14	2.06	−3.38	5.0
Halifax, N. S.	29.97	30.08	+.07	40.1	+ 2.8	48.7	31.5	67	21	2.78	−2.88	T.
Yarmouth, N. S.	30.03	30.10	+.08	41.9	+ 2.0	48.7	35.1	65	15	1.20	−3.36	.....
Charlottetown, P. E. I.	29.99	30.03	+.07	38.6	+ 3.1	44.5	32.6	60	22	1.74	−2.23	1.5
Chatham, N. B.	30.03	30.05	+.08	36.6	+ 5.6	44.3	28.9	64	6	1.39	−2.36	0.8
Father Point, Que.	29.97	29.99	+.03	34.0	+ 5.1	40.2	27.8	68	2	1.05	−2.06	1.9
Quebec, Que.	29.71	30.05	+.03	34.3	+ 5.3	40.6	28.0	61	13	2.10	−1.66	2.5
Montreal, Que.	29.84	30.05	+.02	39.0	+ 7.2	45.3	32.7	62	17	2.44	−1.30	4.7
Stonecliffe, Ont.	29.38	30.00	−.01	35.0	+ 5.9	42.7	27.4	57	13	3.55	+0.97	1.1
Ottawa, Ont.	29.80	30.13	+.11	38.0	+ 6.3	45.0	31.0	64	18	3.13	+0.59	3.2
Kingston, Ont.	29.76	30.08	+.04	41.2	+ 6.2	48.1	34.3	60	22	2.17	−1.07	2.8
Toronto, Ont.	29.65	30.04	.00	42.2	+ 6.6	48.8	35.7	64	27	3.83	+0.69	0.8
White River, Ont.	28.61	29.96	−.02	28.0	+ 7.5	37.1	18.8	52	1	2.15	+0.30	9.0
Port Stanley, Ont.	29.44	30.10	+.05	40.3	+ 3.5	46.8	33.8	57	20	3.85	+0.48	15.0
Southampton, Ont.	29.33	.....	.....	41.5	+ 6.5	48.5	34.5	66	26	3.32	−0.38	6.9
Parry Sound, Ont.	29.33	30.03	+.02	38.4	+ 6.3	45.6	31.2	60	20	3.84	−0.53	7.5
Port Arthur, Ont.	29.26	29.99	−.01	33.2	+ 9.2	41.0	25.4	54	1	1.27	−0.06	2.7
Winnipeg, Man.	29.12	29.98	−.06	31.0	+13.0	38.1	24.0	56	7	0.75	−0.33	1.6
Minnedosa, Man.	28.09	29.96	−.08	27.6	+10.3	37.6	17.5	54	− 6	1.07	+0.07	9.3
Qu'Appelle, Sask.	27.58	29.87	−.13	29.0	+10.2	38.0	20.1	53	5	0.33	−0.56	2.5
Medicine Hat, Alberta	27.52	29.82	−.18	37.1	+ 9.7	47.8	26.4	61	9	0.10	−0.82	0.2
Swift Current, Sask.	27.24	29.84	−.18	33.8	+10.6	45.9	21.5	62	1	0.03	−0.66	0.3
Calgary, Alberta	26.21	29.80	−.18	31.8	+ 6.0	43.6	20.0	60	3	0.97	+0.09	8.1
Banff, Alberta	25.21	29.90	−.06	28.2	+ 2.4	35.2	21.3	44	− 6	2.38	+0.11	20.2
Edmonton, Alberta	27.46	29.79	−.18	30.2	+ 7.3	40.9	19.6	59	3	0.06	−0.52	0.6
Prince Albert, Sask.	28.25	29.85	−.18	25.8	+10.4	35.4	16.2	55	2	0.31	−0.52	3.1
Battleford, Sask.	28.08	29.86	−.16	27.9	+11.6	37.0	18.8	55	0	0.10	−0.48	1.0
Kamloops, B. C.	28.63	29.93	−.03	37.2	+ 3.8	43.7	30.6	63	18	0.71	−0.75	3.0
Victoria, B. C.	29.79	29.89	−.10	44.0	+ 0.8	48.8	39.3	56	31	4.70	−2.27	.....
Barkerville, B. C.	25.43	29.78	−.12	26.1	+ 2.5	33.3	18.9	49	4	5.26	+1.97	50.9
Hamilton, Bermuda	29.95	30.11	+.06	67.7	− 1.0	72.9	62.5	78	51	11.36	+6.98	.....

Climatological Districts of the United States.


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Barkerville
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Battleford
Prince Albert
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Calgary
Medicine Hat
Qu'Appelle
Swift Current
Minnedosa
Winnipeg
Kamloops
Victoria
Seattle
Spokane
Portland
Walla Walla
Yakima
Baker
Boise
Pocatello
Salt Lake City
Grand Junction
Modena
Winnemucca
Tonopah
Independence
Fresno
San Francisco
San Luis Obispo
Los Angeles
San Diego
Phoenix
Yuma
Tucson
Flagstaff
Prescott
Roseburg
Marshfield
Eureka
Red Bluff
Kalispell
Wallace
Missoula
Helena
Havre
Williston
Devils Lake
Grand Forks
Moorhead
Miles City
Billings
Yellowstone Park
Sheridan
Rapid City
Pierre
Huron
Valentine
North Platte
Lincoln
Omaha
Concordia
Topeka
Kansas City
Denver
Leadville
Canon City
Pueblo
Durango
Santa Fe
Albuquerque
Roswell
El Paso
Amarillo
Abilene
Fort Worth
Palestine
Del Rio
San Antonio
Houston
Galveston
Corpus Christi
Brownsville
Taylor
Waco
Shreveport
Oklahoma
Fort Smith
Bentonville
Springfield
Wichita
Dodge City
Iola
Minneapolis
St. Paul
Duluth
Grand Forks
Charles City
Clinton
Sioux City
Des Moines
Davenport
Chicago
La Salle
Rockford
Milwaukee
Madison
Green Bay
La Crosse
Marquette
Houghton
Sault Ste Marie
Port Arthur
White River
Fort William
Parry Sound
Toronto
Kingston
Ottawa
Montreal
Quebec
Cochrane
Stonecliffe
Grand Rapids
Lansing
Detroit
Port Huron
Buffalo
Rochester
Oswego
Albany
Utica
Syracuse
Binghamton
Scranton
Harrisburg
Pittsburg
Cleveland
Akron
Columbus
Indianapolis
Terre Haute
Peoria
Springfield
Quincy
St. Joseph
Hannibal
St. Louis
Columbia
Cairo
Evansville
Louisville
Cincinnati
Dayton
Fort Wayne
South Bend
Toledo
Lexington
Knoxville
Nashville
Memphis
Chattanooga
Corinth
Little Rock
Jackson
Vicksburg
Meridian
Montgomey
Mobile
Pensacola
New Orleans
Burrwood
Annistion
Birmingham
Atlanta
Macon
Savannah
Augusta
Asheville
Charlotte
Wilmington
Columbia
Charleston
Jacksonville
Thomasville
Tallahassee
Tampa
Miami
Nassau
Key West
Havana
Cienfuegos
Puerto Principe
Santiago de Cuba
Bermuda
Cape Henry
Norfolk
Petersburg
Richmond
Lynchburg
Roanoke
Bristol
Hatteras
Raleigh
Wilmington
Cape May
Atlantic City
Trenton
Philadelphia
Harrisburg
Reading
Wilkesbarre
Binghamton
Elmira
Rochester
Buffalo
Erie
Toledo
Cleveland
Akron
Youngstown
Pittsburg
Wheeling
Parkersburg
Charleston
Huntington
Ashland
Lexington
Frankfort
Louisville
Evansville
Indianapolis
Terre Haute
Springfield
Peoria
Rockford
Milwaukee
Green Bay
Madison
La Crosse
Duluth
Minneapolis
St. Paul
Grand Forks
Devils Lake
Williston
Havre
Miles City
Billings
Yellowstone Park
Sheridan
Rapid City
Pierre
Huron
Valentine
North Platte
Lincoln
Omaha
Concordia
Topeka
Kansas City
Denver
Leadville
Canon City
Pueblo
Durango
Santa Fe
Albuquerque
Roswell
El Paso
Amarillo
Abilene
Fort Worth
Palestine
Del Rio
San Antonio
Houston
Galveston
Corpus Christi
Brownsville
Taylor
Waco
Shreveport
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Fort Smith
Bentonville
Springfield
Wichita
Dodge City
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Chart I. Hydrographs of Several Principal Rivers, November, 1913.

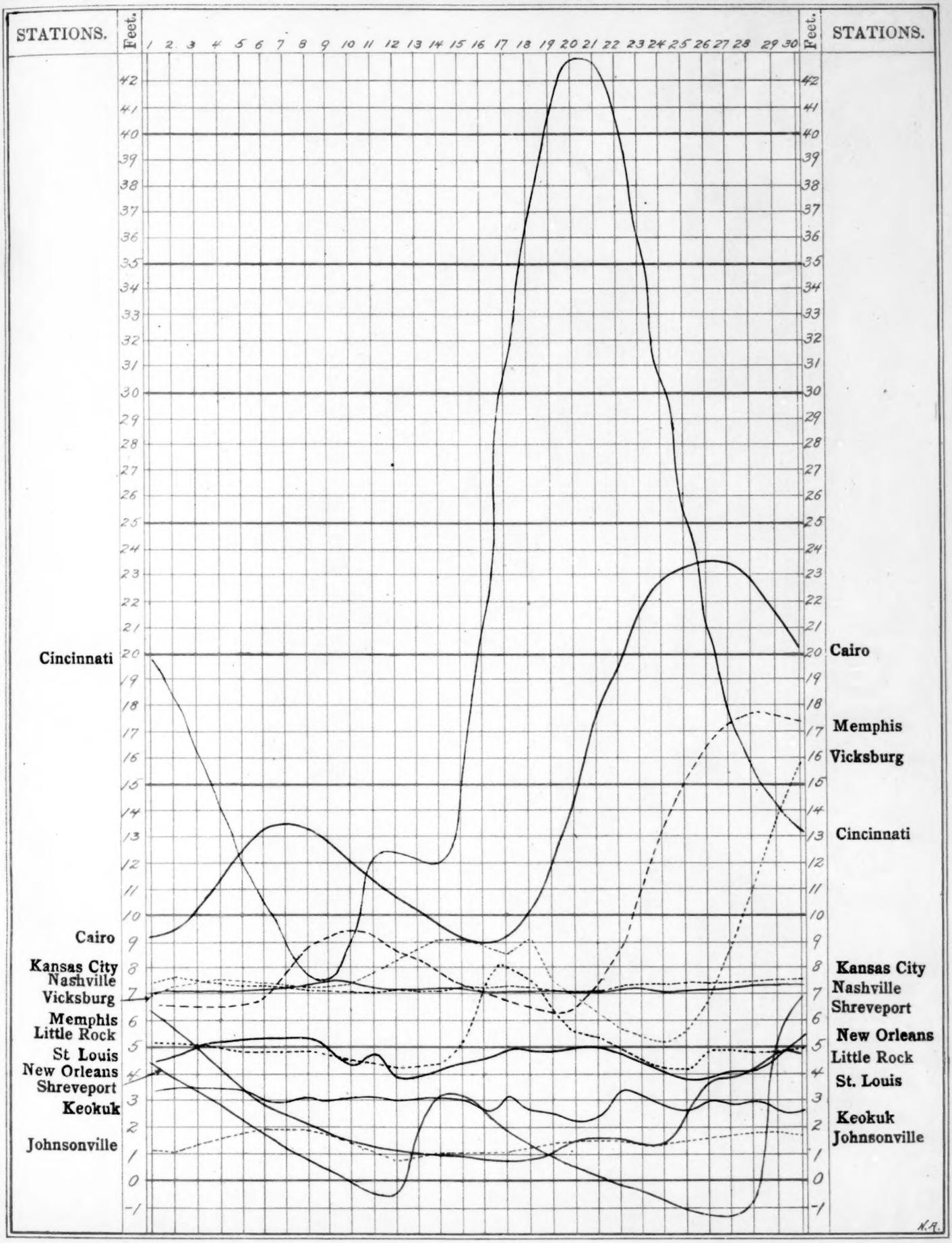

Chart II. Tracks of Centers of High Areas, November, 1913.

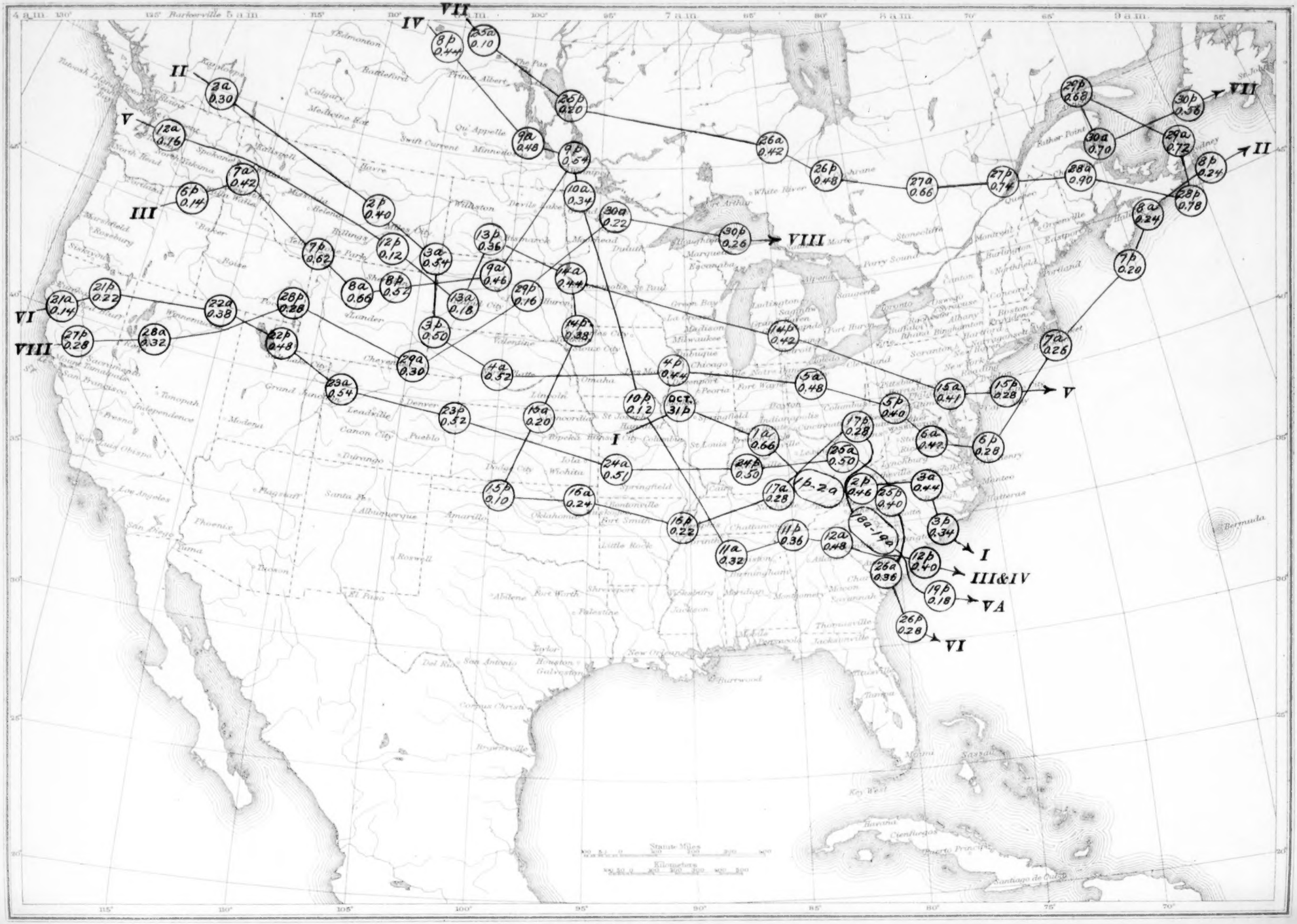

Chart III. Tracks of Centers of Low Areas, November, 1913.

VIII

Chart III. Tracks of Centers of Low Areas, November, 1913.

Chart IV. Departure of the Mean Temperature from the Normal, November, 1913

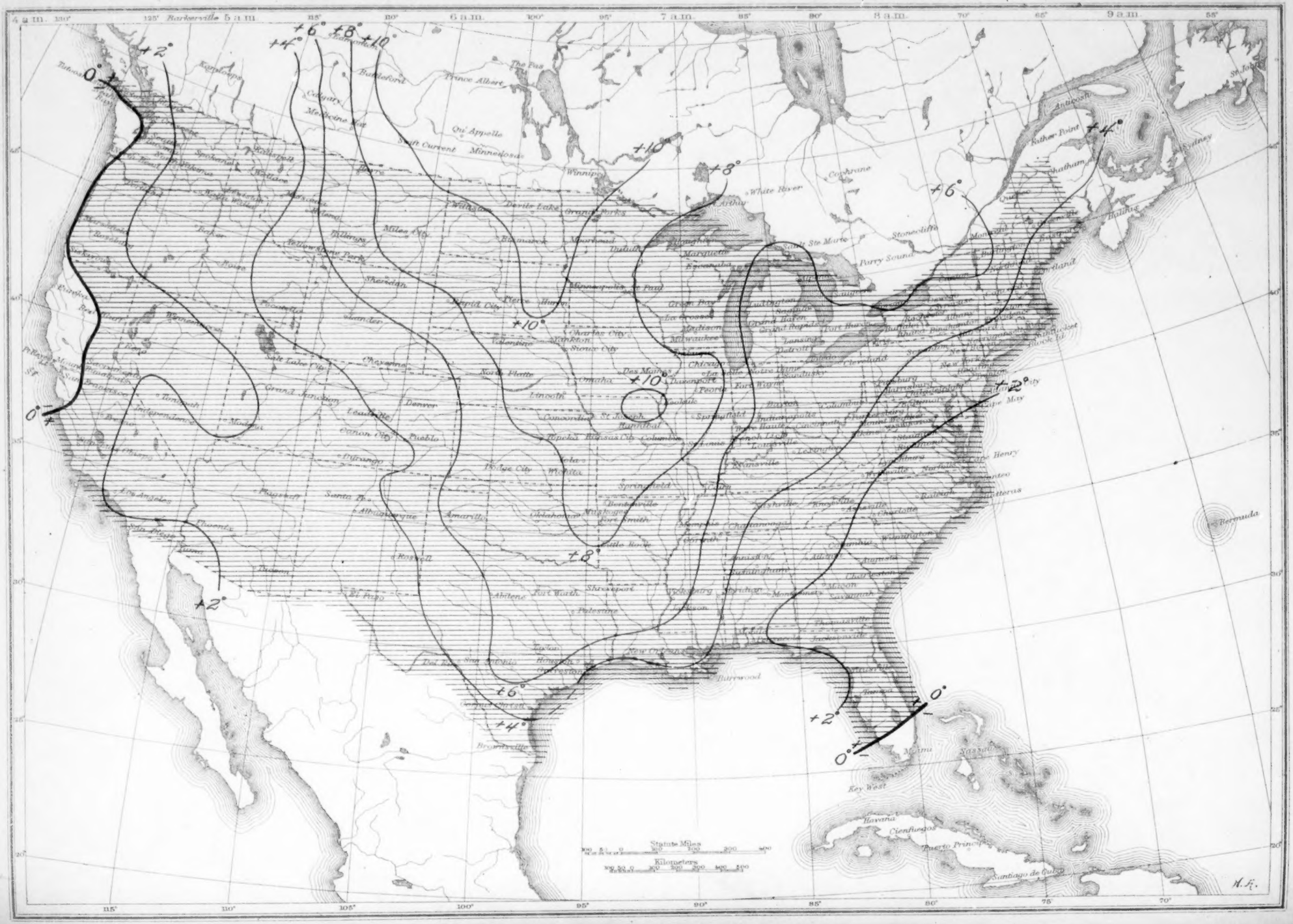

Chart V. Total Precipitation, November, 1913.

Chart V. Total Precipitation, November, 1913.

XLI—81.

Chart VI. Percentage of Clear Sky between Sunrise and Sunset, November, 1913.

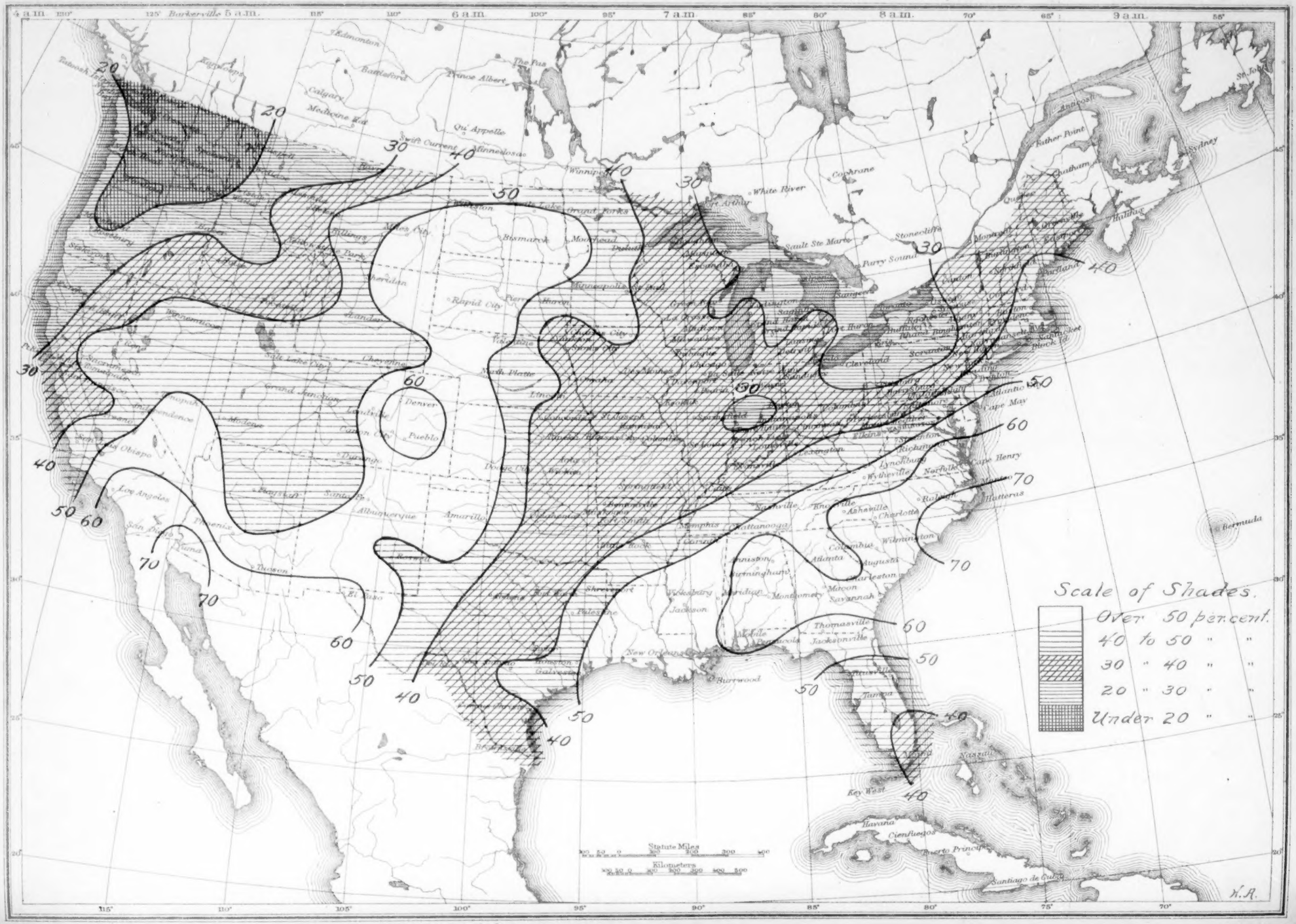

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Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, November, 1913.

Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, November, 1913.